

The Electragist

TRADE MARK REG. U.S. PAT. OFFICE

Vol. 24, No. 1

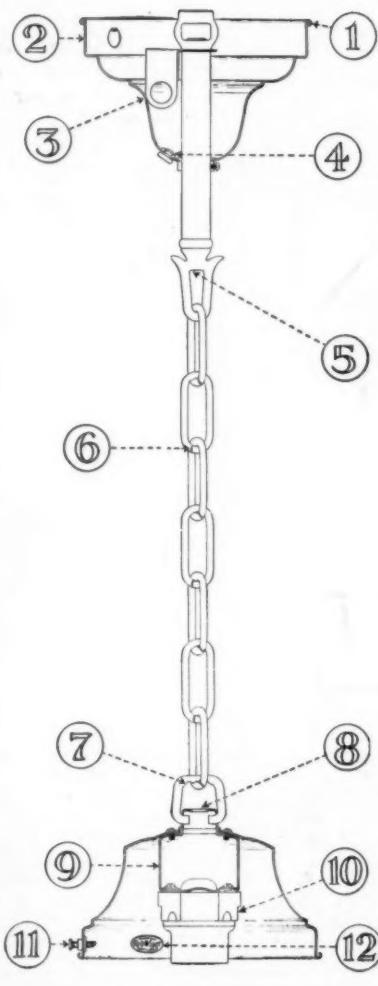
Official Journal of *Association of Electragists
INTERNATIONAL*

NOVEMBER, 1924

Faster Sales and Fatter Profits

for those who handle "Red Spots"

17 POINTS OF SUPERIORITY



- 1—Beaded edge gives extra reinforcement to 22 gauge canopy.
- 2—Deep flange insures neat covering of outlet box. Knock-out in flange permits mounting of switch on canopy.
- 3—Wakefield switch mounting attaches firmly to "main support of the fixture."
- 4—Knock-out for switch cord. Bushing and lock-nut supplied.
- 5—Neatly reamed oversize wireways.
- 6—"Absotite" solid brass chain having tensile strength of 120 lbs.
- 7—Notched loop holds glassware in perfect balance.
- 8—Oversize wireway permits wiring without removing socket.
- 9—One-piece socket extension permits proper positioning of lamp.
- 10—Porcelain socket and 14-gauge wire make it unnecessary to use insulating joint
- 11—Bushing with 5 threads insures firm hold on glassware. Bevel point prevents screw from loosening when glass is in position.
- 12—"RED SPOT" nameplate guarantees quality.
- 13—Silk-covered 14-gauge asbestos-covered stranded wire included.
- 14—Packed one to a carton, plainly labeled.
- 15—"RED SPOT" Hangers have Underwriters' approval.
- 16—Heavy plated finish insures durability.
- 17—Snug fitting holder excludes dirt and insects.

THE F. W.
Wakefield

BRASS COMPANY

VERMILION, OHIO

Pacific Coast Representative: Geo. A. Gray Company, Los Angeles and San Francisco



SIGNAL FARADAY GONGS



- FACTS -

YOU SHOULD KNOW

Entire mechanism protected from dampness and injury by solid-back frame and heavy cast iron housing, fitted firmly onto marine rubber gasket.

Made in Skeleton and enclosed types, the latter with non-guarded, half-grid guarded and full-grid guarded gongs. Sizes: 2 to 18 inches, single or double gongs.

Patented high-power armature kept in magnetic field until ball strikes gong, giving twice the power of any other bell mechanism made.

Will operate on all approved sources of electrical energy. Wound to any resistance desired.

Made in vibrating, single stroke, combination single stroke and vibrating. Electro-mechanical and magneto-extension types.

OUR GUARANTEE
Covering a period of two years from date of sale accompanies every piece of apparatus we manufacture.

Electrical mechanism insulated from frame, all terminals carrying current mounted within housing.

MANUFACTURED BY

STANLEY & PATTERSON, INC.

GENERAL OFFICES AND FACTORY
250 WEST STREET
(3 BLOCKS ABOVE FRANKLIN ST.)

Cable Address: "Eleclight," New York

NEW YORK, U. S. A.

BOSTON
C. R. Corcoran
12 Pearl St.

DETROIT
Jno. L. Turko
2217 Dickerson Ave.

SAN ANTONIO
W. S. Haythorne
301 Schley Ave.

PHILADELPHIA
J. A. Vaughan
Packard Bldg.

DISTRICT SALES OFFICES

DENVER
The Wesco Co., Inc.
1156 Seventh St.

SEATTLE
P. L. Hoadley
Seaboard Bldg.

PITTSBURGH
H. B. Parke
305 7th Avenue

SAN FRANCISCO
Clapp & LaMoree
171 2nd St.

LOUISVILLE
Electrical Sales Co.
Kenyon Bldg.

SALT LAKE CITY
Raymond Ackerman
Dooly Bldg.

LOS ANGELES
Clapp & LaMoree
310 E. 4th St.

CHICAGO
Doherty-Hafner Co.
739 W. Monroe St.

CLEVELAND
C. B. Moore
30 Euclid Arcade Bldg.

HABANA
Arnesto N. Rodriguez
Abreu Bldg.

The Electragist

Official Journal of the
Association of Electragists—International

Formerly *The National Electrical Contractor* and *The Electrical Contractor-Dealer*

S. B. WILLIAMS
Editor

H. H. STINSON
Associate Editor

ARTHUR L. ABBOTT
Technical Director

EDITORIAL ADVISORY STAFF

INSTALLATION

Allan Coggeshall, E.E.
Vice President Katz & Baehler, Inc.

POWER

William J. Shore, E.E.
Contracting Electrical Engineer

CODE
Hubert S. Wynkoop, M.E.
Member Electrical Committee N. F. P. A.

Vol. 24

NOVEMBER, 1924—OCT. 1925

No. 1

X969506

Table of Contents:

Retail Distribution	10
Convention Big Success	11
President Strong's Valedictory	15
Value of the Local Code Committee. <i>A. Penn Denton</i>	17
Merchandising Report Discussed from All Angles.....	19
Wholesale Distribution. <i>W. R. Herstein</i>	20
Better Business Building Through Proper Accounting. <i>F. W. Greusel</i>	25
Manufacturers' Exhibits at West Baden.....	26
Abstracts of Reports and Addresses.....	28
Managing the Motor Repair Shop. <i>G. P. Svendson</i>	31
Handling the Big Job } <i>O. F. Wadleigh</i>	33
} <i>Allan Coggeshall</i>	36
Retailing Radio at a Profit. <i>R. M. Klein</i>	38
Multiplying Profits Through Increased Turnover. <i>J. A. Clark</i>	39
Chats on the National Electrical Code. <i>H. S. Wynkoop</i>	42
As It Seems to Us	44
October Activities	45
Manufacturing	51
A. E. I. Officers and Committeemen	54

Published Monthly—Established in 1901

LAURENCE W. DAVIS, General Manager

IRVIN SHULSINGER, Advertising Director

Copyright, 1924, by Association of Electragists—International.

SUBSCRIPTION RATES

Entered as second-class matter September 1, 1919, at the Post Office at Utica, New York, under the act of March 3, 1879.

One Year, Domestic.....	\$2.00
Foreign Subscriptions, including Canada, per year.....	\$2.50
Single Copies	20 cents

Publication Office: 100 Liberty St., Utica, N. Y. Editorial and Business Office: 15 W. 37th St., New York City

Address all Mail to Editorial and Business Office

Central Stations
and
Electragists } :-

Retail Distribution

THE most serious problem facing the electrical industry today is that of retail distribution—serious not only because of the financial losses suffered but also because of the ill will engendered within the industry.

It is not a new problem but because more people having the welfare of the industry at heart are giving it thoughtful attention more interest in its solution has been aroused. Both the National Electric Light Association and the Association of Electragists, International, have made analyses of this problem and have given out well prepared, unbiased, constructive reports.

It is not a question of who shall retail electrical merchandise. The laws of economics will decide that.

The situation that confronts us now is that it is not possible at the present margins to give adequate service, develop a market and make a profit.

Every branch of the industry, it seems to me, is concerned. If the profit is not there it is apparent that there cannot be the incentive to push appliances. Does this not affect everybody from the manufacturer down?

Unfortunately the subject has been given group thought only by distributors and retailers. The manufacturers have not shown a readiness to talk this problem over with the rest of the industry except as individuals. Fear of the Federal Trade Commission might be holding them back but that is an unwarranted fear. To come out and declare for fundamental principles that are fair has never been declared illegal.

There is a glaring lack of a sound distribution policy. Too many manufacturers are content to

dispose of their product through any sort of a channel without regard for the way in which this hit or miss policy may affect electrical retailers whom they expect to push and service the product.

It is agreed that appliances can be sold at a profit at present discounts but only if sold over the counter with little or no promotion and then only when there are lines other than electrical to share the overhead.

BOTH inadequate margins and lack of sound distribution policy transgress economic laws and will in the long run bring their penalty. Manufacturers who allow adequate compensation and who have sound policies will win the market.

Existing policies are not attracting the best kind of merchants to our industry. New money is not forthcoming from the type of men we need to build for the future. Instead we find our market drifting more and more into non-electrical establishments where no regard for development of the electrical industry exists, where servicing is unheard of and where many cheap and unworthy articles find an outlet.

This is our problem—central station and dealer. We are now fairly started; let us not stop. The less encouragement we receive from the manufacturer the greater should be our efforts.

In my judgment the reorganized Joint Committee for Business Development officially representing all national groups should immediately demonstrate its usefulness by taking up and endeavoring to solve this most important problem of our industry.

President, Association of Electragists, International.

This is the sixth of a series of Editorials on problems which Mr. Strong has the unusual opportunity to see in their mutual relations because of widespread activity in important association work. In addition to being President of the Association of Electragists, he is a member of the Lighting Educational Committee; Director, Society for Electrical Development; Member Executive Committee, National Electric Light Association; Director, Electrical Board of Trade of New York; Chairman Executive Committee, Electrical Contractors Association of New York; Member Advisory Committee New York Electrical League; Director, Electrical Show Company, New York; Member Board of Governors, Building Trades Employers' Association, New York; Treasurer, Credit Association of the Building Trades of New York.—Editor.

Ref. 621.3
Shelfed w. 050

December, 1924

The Electragist

JUN 30 1944 11

The Electragist

Official Journal of the
Association of Electragists—International
Formerly The National Electrical Contractor and The Electrical Contractor-Dealer

S. B. WILLIAMS
Editor

H. H. STINSON
Associate Editor

ARTHUR L. ABBOTT
Technical Director

EDITORIAL ADVISORY STAFF

CODE
Hubert S. Wynkoop, M.E.
Member Electrical Committee N. F. P. A.

INSTALLATION
Allan Coggeshall, E.E.
Vice President Hatzel & Buehler, Inc.

POWER
William J. Shore, E.E.
Contracting Electrical Engineer

Vol. 24

DECEMBER, 1924

No. 2

Table of Contents:

The Electrical Code	12
Better Business Policies Needed. <i>A. H. Timmerman</i>	13
Westinghouse Head Outlines Merchandising Policies	14
Complete Cross Index of the Code	16
House Wiring Credit Control	17
Labor Cost Control	19
Electragist Data Book Revised	20
A System of Overhead Control	21
Demand Factor Recognized in New Panelboard Standard	22
Contracting Stock Control	23
Merchandising Stock Control	25
How Some of Our Readers Express the Christmas Spirit	27
Lighting Fixture Policies for Contractor-Dealers. <i>H. H. Courtright</i>	29
Are You Using Your Own Name?	30
Repair Job Tags	32
Conversion of Old Type Elevator to Electric Operation. <i>F. A. Westbrook</i>	33
Unwired Houses Reduced to Negligible Quantity Through Co-operation	34
Chats on the National Electrical Code. <i>H. S. Wynkoop</i>	36
Electragists You Should Know	37
As It Seems to Us	38
November Activities	39
Manufacturing	45
A. E. I. Officers and Committeemen	48

Published Monthly—Established in 1901

LAURENCE W. DAVIS, General Manager

IRVIN SHULSINGER, Advertising Director

Copyright, 1924, by Association of Electragists—International.

Entered as second-class matter September 1, 1919, at the Post Office at Utica, New York, under the act of March 3, 1879.

SUBSCRIPTION RATES

One Year, Domestic	\$2.00
Foreign Subscriptions, including Canada, per year	\$2.50
Single Copies	20 cents

Publication Office: 100 Liberty St., Utica, N. Y. Editorial and Business Office: 15 W. 37th St., New York City

Address all Mail to Editorial and Business Office

*Central Stations
and
Electragists* } :-

The Electrical Code

THE basic principle of all good government is self government. An industry in a way is like a government in that it expands and grows fastest in proportion to its freedom of self expression.

The electrical industry is fortunate in this respect. In the installation of Electric Service it is governed by a set of laws of its own making and of its own development—the National Electrical Code. It is not a set of laws drawn up by a political body and forced upon us.

Originating with the insurance interests for their own protection the Code has since been developed in cooperation with the electrical industry until today it is the greatest document the industry possesses.

It is no longer the Underwriters' Code. It is the National Electrical Code, developed by the electrical industry in order that the public might enjoy the fullest benefits of electric service with the knowledge that it is safe.

The recent approval of the Code by the American Engineering Standards Committee gives it an official standing never before enjoyed and greatly enhances its value.

The Code has given character to American electrical work that is found in no other country. What section of the world has developed as far as North America in the use of electricity in the home, factory, store or office?

By always bettering and never cheapening the character of electrical work in the Code requirements we have fixed in the public consciousness the knowledge that electricity is safe and can be used freely. This confidence, which results in an ever increasing use of electric service, is directly

proportionate to the degree with which Code standards are practiced locally.

In order to extend the influence and observance of the Code, the Association of Electragists International has undertaken to create local Code Committees in the various cities of the United States and Canada. Already more than one hundred such committees have been formed.

These committees are composed of a representative of the Underwriters, of the municipality, of the central station and of the contractors. Where it seems advisable the electrical jobbers and manufacturers are also given representation.

The sole duty of a local code committee is to promote uniform interpretation and general observation of the National Electrical Code. Where such a committee has started to function all interests have benefited greatly, but none more so than the central station.

I feel that the executives of central stations should place on this committee large calibre representatives and should support this work to the fullest extent.

We have needed a uniformity of Code interpretation, but we have left the interpretation largely to employees of the city or of the insurance interests. Is it not better that the electrical industry should take the lead in the interpretation of its own laws? Is this not in line with the principles of self government?

President, Association of Electragists, International

This is the seventh of a series of Editorials on problems which Mr. Strong has the unusual opportunity to see in their mutual relations because of widespread activity in important association work. In addition to being President of the Association of Electragists, he is a member of the Lighting Educational Committee; Director, Society for Electrical Development; Member Executive Committee, National Electric Light Association; Director, Electrical Board of Trade of New York; Chairman Executive Committee, Electrical Contractors Association of New York; Member Advisory Committee New York Electrical League; Director, Electrical Show Company, New York; Member Board of Governors, Building Trades Employers' Association, New York; Treasurer, Credit Association of the Building Trades of New York.—Editor.

The Electragist

Official Journal of the
Association of Electragists—International

Formerly *The National Electrical Contractor* and *The Electrical Contractor-Dealer*

S. B. WILLIAMS
Editor

H. H. STINSON
Associate Editor

ARTHUR L. ABBOTT
Technical Director

EDITORIAL ADVISORY STAFF

CODE
A. Penn Denton
Member Electrical Committee N. F. P. A.

INSTALLATION
Allan Coggeshall, E.E.
Vice President Hatzel & Buehler, Inc.

POWER
William J. Shore, E.E.
Contracting Electrical Engineer

Vol. 24

JANUARY, 1925

No. 3

Table of Contents:

Good Will	12
Looking Forward. <i>S. B. Williams</i>	13
The Dependable Electrical Contractor.....	15
Estimating for Electrical Contractors (Lesson No. 1). <i>Arthur L. Abbott</i>	16
What the Standard Accounting System Showed This Electragist. <i>L. W. Davis</i>	22
The Story of the Code.....	25
Fundamentals of Success for Electragists. <i>Clyde L. Chamblin</i>	26
Can There Be a Standard for Radio Service?.....	27
I WILL	29
Electragists You Should Know.....	30
Milwaukee's Plan for Future Distribution of the Standard Accounting System....	31
Editorials	32
A. E. I. Officers and Committeemen.....	34
Organization List	35
December Activities	36
Manufacturing	42

Published Monthly—Established in 1901

LAURENCE W. DAVIS, General Manager

IRVIN SHULSINGER, Advertising Director

Copyright, 1924, by Association of Electragists—International.

Entered as second-class matter September 1, 1919, at the Post Office at Utica, New York, under the act of March 3, 1879.

SUBSCRIPTION RATES

One Year, Domestic.....	\$2.00
Foreign Subscriptions, including Canada, per year.....	\$2.50
Single Copies	20 cents

Publication Office: 100 Liberty St., Utica, N. Y. Editorial and Business Office: 15 W. 37th St., New York City

Address all Mail to Editorial and Business Office

*Central Stations
and
Electragists* } :-

Good Will

THE twentieth century will always be recalled in history as the age when business drew away from the selfishly selfish policy of the golden nineties and embraced the policy of good will. It seems very appropriate therefore, as the last year in the first quarter of the century opens, that I speak of good will between two such essential parts of the electrical industry—the central station and the electragist.

The two branches, which are the industry's contact with the public, are so immeasurably interdependent that the building of mutual good will is fundamental.

Good will is an asset which must be mutual. The contractor is dependent for his development upon the extension of light and power service. The utility will have no incentive for a liberal policy of extension unless it is assured a fair rate of return. It is difficult to secure a fair rate of return if the contractors are unfriendly. Unfair tactics by the central station cannot be expected to promote friendliness on the part of the contractors.

Good will is dependent upon policies enacted and carried out. In the policies of each group the other sees room for improvement. Thus the electragists say to the central stations:

Do not patronize us but work with us.

Do not speak disdainfully of our profession, but rather speak proudly of us that we may have something to live up to rather than down to.

Do not sell wiring.

Do not sell appliances at less than list.

Do not sell on time payments except you add proper carrying charges.

Do not conduct a wiring campaign at such low prices that no co-operating contractor can install any-

thing but the cheapest job because you are then setting up a low standard of quality.

Refuse to connect up very poor or cheap jobs.

Educate the public on quality and adequate wiring; it means more satisfied customers.

Connect jobs promptly that the contractor need not have to wait for his money.

Do not change your service rules until you have first discussed the proposed changes with the local contractors.

And to the electragists the central stations say with equal fairness:

Speak well always of your central station. If there is any misunderstanding take it up with us rather than try your case before the public.

Follow central station service rules without deviation.

Where service rules are not understood, or there may be some difficulty, take it up with the central station beforehand that we may not lose a month's income from the customer.

Build your wiring business by strong sales effort that will tie in with the promotion work of the central station.

Install only quality work that the utility may have fewer service complaints.

Cooperate with the central station in its campaigns.

Do not wire a house without finding out if service is in the street.

Let the central station know ahead of time when you are ready to have the meter set.

I have always wondered at the patience of both sides, but let us this year build mutual good will and in unity of spirit go ahead stronger than ever.

President, Association of Electragists, International

This is the eighth of a series of Editorials on problems which Mr. Strong has the unusual opportunity to see in their mutual relations because of widespread activity in important association work. In addition to being President of the Association of Electragists, he is a member of the Lighting Educational Committee; Director, Society for Electrical Development; Member Executive Committee, National Electric Light Association; Director, Electrical Board of Trade of New York; Chairman Executive Committee, Electrical Contractors Association of New York; Member Advisory Committee New York Electrical League; Director, Electrical Show Company, New York; Member Board of Governors, Building Trades Employers' Association, New York; Treasurer, Credit Association of the Building Trades of New York.—Editor.

The Electragist

Official Journal of the
Association of Electragists—International

Formerly *The National Electrical Contractor* and *The Electrical Contractor-Dealer*

S. B. WILLIAMS
Editor

H. H. STINSON
Associate Editor

ARTHUR L. ABBOTT
Technical Director

EDITORIAL ADVISORY STAFF

CODE
A Penn Denton
Member Electrical Committee N. F. P. A.

INSTALLATION
Allan Coggeshall, E.E.
Vice President Hatzel & Buchler, Inc.

POWER
William J. Shore, E.E.
Contracting Electrical Engineer

Vol. 24

FEBRUARY, 1925

No. 4

Table of Contents:

An All-Metal Code.....	12
The Principles of the All-Metal Code.....	13
Electragists Tell Why They Favor All-Metal Construction.....	15
Estimating for Electrical Contractors (Lesson No. 2). Arthur L. Abbott.....	19
Reducing Labor Turnover.....	21
Following Through on the Lighting Contest.....	25
What to Do When the Manufacturer Says "Don't Kill the Order.".....	27
Protective Grounding. J. W. Borden.....	28
Radio Service Hints.....	31
Electragists You Should Know.....	32
Information Others Have Asked For.....	33
Editorials	34
A. E. I. Officers and Committeemen.....	36
Organization List.....	36
January Activities.....	38
Manufacturing	43

Published Monthly—Established in 1901

LAURENCE W. DAVIS, General Manager

IRVIN SHULSINGER, Advertising Director

Copyright, 1925, by Association of Electragists—International.

Entered as second-class matter September 1, 1919, at the Post Office at Utica, New York, under the act of March 3, 1879.

SUBSCRIPTION RATES

One Year, Domestic.....	\$2.00
Foreign Subscriptions, including Canada, per year.....	\$2.50
Single Copies	20 cents

Publication Office: 100 Liberty St., Utica, N. Y. Editorial and Business Office: 15 W. 37th St., New York City

Address all Mail to Editorial and Business Office

*Central Stations
and
Electragists* } :-

An All-Metal Code

ONE of the handicaps that the electrical industry has had to overcome is the belief of the uninformed public that electricity is dangerous under any condition. Newspapers even now attribute the cause of every fire of unknown origin to crossed wires. Nevertheless, by dint of publicity and conscientious work we have succeeded in getting the public to believe that while electricity may be dangerous, this industry has surrounded it with such safeguards that it may be used anywhere with impunity.

This public confidence, however, is gradually overreaching itself and is becoming familiar to the point of contempt. More and more the man of the house is coming to buy from hardware stores a bit of wire, some sockets and a length of flexible cord in order to make an addition to his electric light installation.

He does not go back to an outlet, but taps on anywhere he desires. That he puts more sockets on an already loaded circuit doesn't bother him. He doesn't know any better. Never does he take out a permit—never is his work inspected.

Is it any wonder that such work about the house by Mr. Fix-it is increasing the electrical fire hazard?

This, of course, does not and cannot very well happen when all the wires are enclosed in metal. When an all-metal system is installed it is not possible for other pipes placed in the walls afterwards to have any effect on the wiring because of the protecting armor.

Moreover, the Electrical Committee in the 1923 edition of the National Electrical Code recognized

the necessity for full and complete protection to the public by insisting on multiple grounds. This is possible only with an all metal system.

MOST of our large cities now have ordinances limiting the wiring in the business district to all metal. If in a district where only fire proof construction is permitted all metal is necessary, how much more necessary is it in residential and outlying districts where wood is the prevailing building material.

The central stations have for a long time recognized the use of metal up to the meter. We believe it should not stop there but should cover the entire installation. To this end we urge the adoption everywhere of this principle—the principle of an ALL METAL CODE.

From figures collected by this Association it would seem that an All Metal job need not cost any more than a less protected system. The protection to the public, however, would be infinitely greater.

Twenty-one cities are now on an All Metal basis. This Association is working to increase this number. We ask your cooperation and help.

President, Association of Electragists, International

This is the ninth of a series of Editorials on problems which Mr. Strong has the unusual opportunity to see in their mutual relations because of widespread activity in important association work. In addition to being President of the Association of Electragists, he is a member of the Lighting Educational Committee; Director, Society for Electrical Development; Member Executive Committee, National Electric Light Association; Director, Electrical Board of Trade of New York; Chairman Executive Committee, Electrical Contractors Association of New York; Member Advisory Committee New York Electrical League; Director, Electrical Show Company, New York; Member Board of Governors, Building Trades Employers' Association, New York; Treasurer, Credit Association of the Building Trades of New York.—Editor.

The Electragist

(*The National Electrical Contractor and The Electrical Contractor-Dealer*)

*Official Journal of the
Association of Electragists—International*

S. B. WILLIAMS
Editor

H. H. STINSON
Associate Editor

ARTHUR L. ABBOTT
Technical Director

EDITORIAL ADVISORY STAFF

CODE
A Penn Denton
Member Electrical Committee N. F. P. A.

INSTALLATION
Allan Coggeshall, E.E.
Vice President Hatzel & Buehler, Inc.

POWER
William J. Shore, E.E.
Contracting Electrical Engineer

Vol. 24

MARCH, 1925

No. 5

Table of Contents:

Cheap Wiring	12
Electrical Construction the Second Line Defense of Electrical Salesmanship.	
R. A. Goeller	13
Methods Employed to Keep Track of Tools.....	15
Syracuse Brings Out First Red Seal Specifications	18
A Criticism of Free Delivery on Motor Repairs. <i>Ruel McDaniel</i>	19
Estimating for Electrical Contractors (Lesson No. 3). <i>Arthur L. Abbott</i>	21
You Don't Have to Be on Main Street!	26
Radio Service Hints	28
A Cultivator of the Farm Plant Field.....	29
Factors to Consider in Selecting Wire. <i>F. A. Westbrook</i>	31
Electragists You Should Know.....	33
Editorials	34
A. E. I. Officers and Committeemen.....	36
Organization List	36
February Activities	38
Manufacturing	45

Published Monthly—Established in 1901

LAURENCE W. DAVIS, General Manager

IRVIN SHULSINGER, Advertising Director

Copyright, 1925, by Association of Electragists—International.

Entered as second-class matter September 1, 1919, at the Post Office at Utica, New York, under the act of March 3, 1879.

SUBSCRIPTION RATES

One Year, Domestic.....	\$2.00
Foreign Subscriptions, including Canada, per year.....	\$2.50
Single Copies	20 cents

Publication Office: 100 Liberty St., Utica, N. Y. Editorial and Business Office: 15 W. 37th St., New York City

Western Office: Jones & Sale, 1014 Garrick Bldg., Chicago.

Address all Mail to Editorial and Business Office

*Central Stations
and
Electragists* } :-

Cheap Wiring

AN impression exists in the minds of many central station men and contractors that there is a real need for cheaper forms of wiring. On what is this impression based? On the fact that there are still millions of unwired homes many of them in the poorer quarter. Since they have withstood the sales assault of the industry, the assumption is that low quotations will win them.

The central stations seem to think they want this load, but what kind of a load will they get from poorly and inadequately wired buildings? Will it be large enough to pay its way? We doubt it.

What will such cheap jobs profit a contractor? As a matter of fact they could be handled only by a one man contractor working for his wages and no profit.

Does the public want cheap wiring?

The public does not want cheap anything. What the public wants is more for the same money, or the same for less money; but seldom or almost never less for less money. The public is always willing to spend more money for added quality.

In the matter of wiring the public is begging not for cheaper wiring at lower prices, but for better installations, more adequate ones. Any one who has participated in an electric home exhibit knows that. Rain or shine there is a line of people going through.

What does the public know about the price of

wiring? Nothing, except that someone says he can do the same job for less money.

As a matter of fact the public has never bought wiring. Does the customer interest himself in the size and make of the wire, or the sockets, or the conduit? The customer is buying those comforts and conveniences that he thinks go with electric service. If he gets an inadequate job he will be dissatisfied. Comfort isn't bought at a price and it is time that we all woke up to this fact and stopped this demand for cheapness.

WHAT we want today is not a cheaper form of wiring but more efficient methods of wiring, better wiring layouts and more consideration for the customer who is going to use the installation.

With this closing thought I am bringing this series of letters to an end. They have been an attempt to show the interdependence of the central station and contracting branches of the electrical industry and at the same time to bring these two great bodies into a better understanding of mutual problems with the hope that the electrical industry will make surer progress if the installation and energy supply branches are in close agreement.

President, Association of Electragists, International

This is the tenth of a series of Editorials on problems which Mr. Strong has the unusual opportunity to see in their mutual relations because of widespread activity in important association work. In addition to being President of the Association of Electragists, he is a member of the Lighting Educational Committee; Director, Society for Electrical Development; Member Executive Committee, National Electric Light Association; Director, Electrical Board of Trade of New York; Chairman Executive Committee, Electrical Contractors' Association of New York; Member Advisory Committee New York Electrical League; Director, Electrical Show Company, New York; Member Board of Governors, Building Trades Employers' Association, New York; Treasurer, Credit Association of the Building Trades of New York.—Editor.

The Electragist

(*The National Electrical Contractor and The Electrical Contractor-Dealer*)

*Official Journal of the
Association of Electragists—International*

S. B. WILLIAMS
Editor

H. H. STINSON
Associate Editor

ARTHUR L. ABBOTT
Technical Director

EDITORIAL ADVISORY STAFF

CODE
A Penn Denton
Member Electrical Committee N. F. P. A.

INSTALLATION
Allan Coggeshall, E.E.
Vice President Hatzel & Buehler, Inc.

POWER
William J. Shore, E.E.
Contracting Electrical Engineer

Vol. 24

APRIL, 1925

No. 6

Table of Contents:

Our Policy	12
A System That Checks Up Each Job at a Glance.....	13
Association Lays Down Definite Trade Policy.....	15
Estimating For Electrical Contractors (Lesson No. 4). Arthur L. Abbott.....	17
A Combination Work Order and Acknowledgment Form.....	22
James R. Strong Honored	23
Advertising The Completed Job	25
What Other Industries Are Doing About Advertised Resale Price. H. H. Stinson..	26
A Kit For the Radio Service Man.....	29
Robinson Sells Beauty First, Fixtures Second. Ruel McDaniel.....	30
Radio Service Hints	32
Electragists You Should Know.....	33
Editorials	34
A. E. I. Officers and Committeemen	36
Organization List	36
March Activities	38
Manufacturing	45

Published Monthly—Established in 1901

LAURENCE W. DAVIS, General Manager

IRVIN SHULSINGER, Advertising Director

Copyright, 1925, by Association of Electragists—International.

Entered as second-class matter September 1, 1919, at the Post Office at Utica, New York, under the act of March 3, 1879.

SUBSCRIPTION RATES

One Year, Domestic.....	\$2.00
Foreign Subscriptions, including Canada, per year.....	\$2.50
Single Copies	20 cents

Publication Office: 100 Liberty St., Utica, N. Y. Editorial and Business Office: 15 W. 37th St., New York City

Western Office: Jones & Sale, 1014 Garrick Bldg., Chicago.

Address all Mail to Editorial and Business Office

RESOLVED: That the Trade Policy Committee and the president be instructed to carry out vigorously the policy of this Association—that is, that distribution shall be from manufacturer through jobber through contractor and dealer to consumer.

—Passed unanimously, the Executive Committee,
Association of Electragists, International, March 17, 1925.

Our Trade Policy

THAT there may be no question concerning the attitude of the Association of Electragists, International, your executive committee on March 17 unanimously agreed that the only trade policy that can be justified as economically sound is that the distribution of electrical merchandise should be from manufacturer through jobber to contractor and dealer to consumer.

This determination of your executive committee follows the investigations of our trade policies committee which brought out some of the evils disturbing the orderly distribution of electrical materials.

For some time contractors and contractor-dealers have complained bitterly about the practice of manufacturers and jobbers by-passing them at equal or even lower prices.

The existence of this situation is not denied but the counter charge is made that the contracting branch of the industry has not kept its skirts clean nor has it had a definite policy. It must be admitted that many contractors and dealers have sought to eliminate the jobber in obtaining their supplies.

We are now recognizing the orderly principle of distribution which has been instrumental in building the electrical business. Without this direction to the movement of supplies there can only be incrimination, price cutting and bad feeling.

Any break down of this principle must result in a market based on price only. When price is the governing factor, service has little opportunity to make headway.

If the electrical industry is to maintain its reputation for dependability and service it must do nothing to build a market solely on price.

If the disturbing factors which have entered into the movement of electrical merchandise from producer to consumer are to be eliminated, this orderly principle of distribution must not only become our preaching but our practice.

WITH this policy we maintain that a channel of distribution can be set up that is fair, equitable, sound and logical. As an evidence of good faith every member of our Association should recognize his individual responsibility in making the policy effective. If we are able to crystalize this attitude in the individual conduct of our members we believe that the manufacturer and the jobber will each feel that he has the corresponding obligation and will cooperate to the fullest extent in the realization of the ideal.

Associations may pass resolutions but resolutions can only be realized through membership support.

JOSEPH A. FOWLER,
President, Association of Electragists, International

The Electragist

(The National Electrical Contractor and The Electrical Contractor-Dealer)

Official Journal of the
Association of Electragists—International

S. B. WILLIAMS
Editor

H. H. STINSON
Associate Editor

ARTHUR L. ABBOTT
Technical Director

EDITORIAL ADVISORY STAFF

CODE
A. Penn Denton, E. E.
Member Electrical Committee N. F. P. A.

INSTALLATION
Allan Coggeshall, E.E.
Vice President Hatzel & Buehler, Inc.

POWER
William J. Shore, E.E.
Contracting Electrical Engineer

Vol. 24

MAY, 1925

No. 7

Table of Contents:

Here is the Way to Get Cost Plus Profit On Every Job. <i>Lawrence W. Davis</i>	13
How We Sell Motors in Competition with Manufacturers and Jobbers and Make Money. <i>M. L. Pomares</i>	16
The Use of Mechanics' Lien by Sub-Contractors. <i>Albert W. Fribourg</i>	18
"Model Home" Sells Fixtures. <i>Ruel McDaniel</i>	19
Estimating for Electrical Contractors (Lesson No. 5). <i>Arthur L. Abbott</i>	21
How to File Catalogs, Price Sheets, Pamphlets.....	23
New York's Best Known Radio Retailers Have Based Their Success on Good Service	25
Radio Service Hints	28
What It Costs to Retail in Other Industries. <i>H. H. Stinson</i>	29
Pangborne's Men Can't Say "I Didn't Know"	31
Electragists You Should Know	33
Editorials	34
A. E. I. Officers and Committeemen.....	36
Organization List	36
April Activities	38
Manufacturing	44

Published Monthly—Established in 1901

LAURENCE W. DAVIS, General Manager

IRVIN SHULSINGER, Advertising Director

Copyright, 1925, by Association of Electragists—International.

Entered as second-class matter September 1, 1919, at the Post Office at Utica, New York, under the act of March 3, 1879.

SUBSCRIPTION RATES

One Year, Domestic.....	\$2.00
Foreign Subscriptions, including Canada, per year.....	\$2.50
Single Copies	20 cents

Publication Office: 100 Liberty St., Utica, N. Y. Editorial and Business Office: 15 W. 37th St., New York City

Western Office: Jones & Sale, 1014 Garrick Bldg., Chicago.

Address all Mail to Editorial and Business Office

The FORWARD MARCH

*of the Electrical Industry is dependent
on the maintenance of high standards
and continued endeavor towards progress*



As manufacturers of Rubber Insulated Wires and Cables our constant effort is to serve the best interests of the Industry; we further believe that all electrical work, maintenance and new installations, should be done by a reputable Electrical Contractor.

A-A WIRE CO., Inc.

110 EAST FORTY-SECOND ST.

NEW YORK

A-A N.E.C.

A-A RED

A-A 30%

(Reprinted by request, issue July, 1924.)

The Electragist

(*The National Electrical Contractor and The Electrical Contractor-Dealer*)

*Official Journal of the
Association of Electragists—International*

S. B. WILLIAMS
Editor

ALFRED BATSON
Associate Editor

ARTHUR L. ABBOTT
Technical Director

EDITORIAL ADVISORY STAFF

CODE
A. Penn Denton, E. E.
Member Electrical Committee N. F. P. A.

INSTALLATION
Allan Coggeshall, E.E.
Vice President Hatzel & Buchler, Inc.

POWER
William J. Shore, E.E.
Contracting Electrical Engineer

Vol. 24

JUNE, 1925

No. 8

Table of Contents:

Distribution Channels in Other Industries. <i>H. H. Stinson</i>	13
A Scale for Computing Individual Job Overhead.....	16
Local Code Practice Wasteful. <i>W. J. Canada</i>	18
Another Force Working to Build a Demand for Quality House Wiring.....	20
Estimating for Electrical Contractors. (Lesson No. 6). <i>Arthur L. Abbott</i>	21
Meeting the Public's "Show Me" Attitude in Motor Repairs. <i>Ruel McDaniel</i>	23
Extent of All-Metal	25
How Davis Makes Money Wiring Speculative Houses.....	27
Electragists You Should Know	29
The Wiring of Farm Buildings Opens New Field to the Electragist.....	30
Editorials	32
Organization List	34
Radio Service Hints	36
A. E. I. Quarter Centennial Plans Under Way.....	37
May Activities	38
Manufacturing	46

Published Monthly—Established in 1901

LAURENCE W. DAVIS, General Manager

IRVIN SHULSINGER, Advertising Director

Copyright, 1925, by Association of Electragists—International.

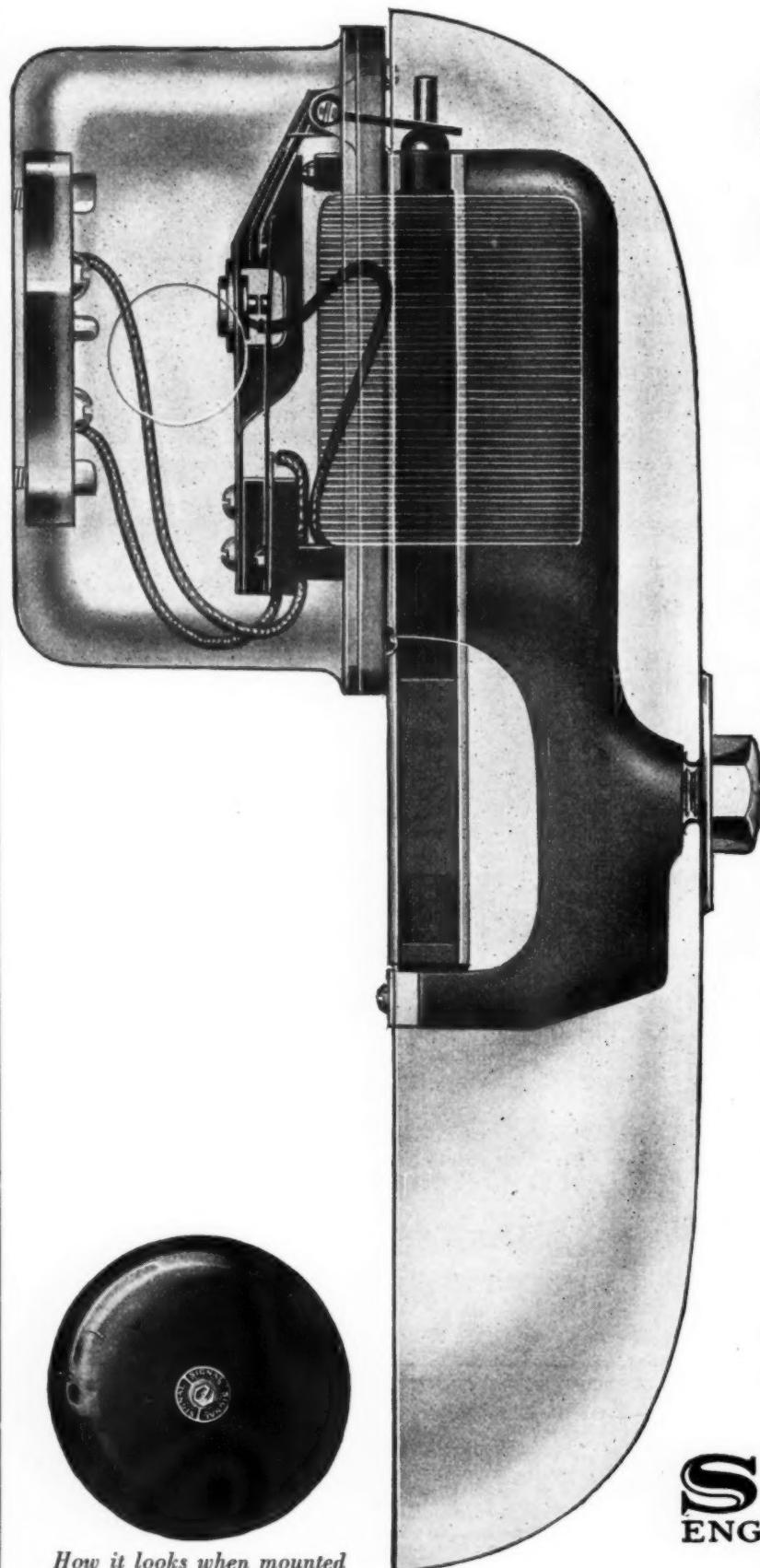
Entered as second-class matter September 1, 1919, at the Post Office at Utica, New York, under the act of March 3, 1879.

SUBSCRIPTION RATES
One Year, Domestic..... \$2.00
Foreign Subscriptions, including Canada, per year..... \$2.50
Single Copies 20 cents

Publication Office: 100 Liberty St., Utica, N. Y. Editorial and Business Office: 15 W. 37th St., New York City

Western Office: Jones & Sale, 1014 Garrick Bldg., Chicago.

Address all Mail to Editorial and Business Office



SIGNAL
ENGINEERING & MFG. CO.

Vibrating Gong

Contractors will readily realize the many advantages of "Signal" Vibrating Gongs:

They are maintenance free, universal back box, knockouts on all sides. Complete with terminal block spade clips on bell coil—eliminating soldering.

Furnished to operate on any voltage—A. C. or D. C. Supplied in 4, 6, 8, 10, and 12 inch sizes.

The simple design and sturdy construction of "Signal" Gongs account for their reliability—and for their complete freedom from trouble, adjustment or maintenance of any kind.

"Signal" Gongs give a crystal-clear ring of great penetrating power—clear and compelling but not offensively strident or unduly loud.

The contractor can standardize on "Signal" with complete assurance that his customers will get successful, never-failing, care-free service. We have given these bells tests equivalent to ten years' use and failed to wear out any part of them.

SIGNAL
ENGINEERING & MFG. CO.
537 Canal St., New York, N. Y.

Save this page. Write for Bulletin A-25

July, 1925

The Electragist

13

The Electragist

(The National Electrical Contractor and The Electrical Contractor-Dealer)

Official Journal of the
Association of Electragists—InternationalS. B. WILLIAMS
EditorALFRED BATSON
Associate EditorARTHUR L. ABBOTT
Technical Director**EDITORIAL ADVISORY STAFF**CODE
A. Penn Denton, E. E.
Member Electrical Committee N. F. P. A.INSTALLATION
Allan Coggeshall, E.E.
Vice President Hazelt & Buehler, Inc.POWER
William J. Shore, E.E.
Contracting Electrical Engineer

Vol. 24

JULY, 1925

No. 9

Table of Contents:

Jobbers Must Choose Between Contractor-Dealers and Industrials.	
<i>Joseph A. Fowler, President, Association of Electragists, International</i>	15
East Meets West in New York and Both Profit. <i>Alfred Batson</i>	17
The Fallacy of Free Service. <i>H. H. Stinson</i>	19
Estimating for Electrical Contractors. (Lesson No. 7). <i>Arthur L. Abbott</i>	23
Contractor-Dealers Costs May Now be Departmentalized	26
Instructions for Installing Power Switchboards	28
Contactors Used for Power and Feeder Circuit Control. <i>T. Harvey</i>	31
More Than a Third of American Cities Without Wiring Ordinances	33
Electragists You Should Know	34
Radio Service Hints	35
Editorials	36
Organization List	38
June Activities	40
Manufacturing	46

Published Monthly—Established in 1901

LAURENCE W. DAVIS, General Manager

IRVIN SHULSINGER, Advertising Director

Copyright, 1925, by Association of Electragists—International.

SUBSCRIPTION RATES

Entered as second-class matter September 1, 1919, at the Post
Office at Utica, New York, under the act of March 3, 1879.One Year, Domestic \$2.00
Foreign Subscriptions, including Canada, per year \$2.50
Single Copies .20 cents

Publication Office: 100 Liberty St., Utica, N. Y. Editorial and Business Office: 15 W. 37th St., New York City

Western Office: Jones & Sale, 1014 Garrick Bldg., Chicago.

Address all Mail to Editorial and Business Office



Electragists:



TO OUR good friends the electragists and to the electrical industry in general:

We take pleasure and pardonable pride in announcing that we are now manufacturing and delivering Rubber Covered Code Wire.

It is impossible in this announcement, or in any announcement, to adequately convey or properly picture the quality of the wire we are producing—quality brought about by unique and unusually favorable conditions.

Triangle Wire is produced in a new factory—a plant that we believe to be without equal in the Industry. Here, unusual manufacturing facilities are combined with skill and experience in methods that insures absolute uniformity of excellence.

The Triangle Organization KNOWS the contractor and his problems; this knowledge, gained through years of personal contact with contractors and actual experience in the contracting business, is the sign post that shows us what the contractor wants and needs.

Triangle Wire now takes its place beside our other products—metallic and non-metallic conduit, armored cable, etc. Triangle packages, containing these good wiring materials, are pictured below. Your jobber has all three—ready to rush them to you.

Triangle Conduit Co. Inc.

General Offices:

Dry Harbor Road and Cooper Ave., Brooklyn, N. Y.

Factories: Brooklyn, N. Y.; Chicago, Ill.

REPRESENTED IN PRINCIPAL CITIES



The Electragist

(The National Electrical Contractor and The Electrical Contractor-Dealer)

Official Journal of the
Association of Electragists—InternationalS. B. WILLIAMS
EditorALFRED BATSON
Associate EditorARTHUR L. ABBOTT
Technical Director**EDITORIAL ADVISORY STAFF**CODE
A. Penn Denton, E. E.
Member Electrical Committee N. F. P. A.INSTALLATION
Allan Coggeshall, E.E.
Vice President Hatzel & Buehler, Inc.POWER
William J. Shore, E.E.
Contracting Electrical Engineer

Vol. 24

AUGUST, 1925

No. 10

Table of Contents:

Governor Trumbull to Address A. E. I. Convention.....	13
Estimating for Electrical Contractors (Lesson No. 8). Arthur L. Abbott.....	15
Recent Developments in Electric Motor Control. C. F. Scott.....	19
Electragists You Should Know	22
Square Conduit for Underfloor Circuiting	23
Reinspection in New York City. Joseph C. Forsyth.....	27
The Cost of Bending Large Conduit.....	29
Sell the Customer What He Wants: Light Not Fixtures. Arthur H. Ford.....	31
Low Voltage Problems. C. H. Moulton.....	33
Editorials	34
Association List	36
July Activities	38
Manufacturing	44

Published Monthly—Established in 1901

LAURENCE W. DAVIS, General Manager

IRVIN SHULSINGER, Advertising Director

Copyright, 1925, by Association of Electragists—International.

Entered as second-class matter September 1, 1919, at the Post Office at Utica, New York, under the act of March 3, 1879.

SUBSCRIPTION RATES

One Year, Domestic.....	\$2.00
Foreign Subscriptions, including Canada, per year.....	\$2.50
Single Copies	20 cents

Publication Office: 100 Liberty St., Utica, N. Y. Editorial and Business Office: 15 W. 37th St., New York City

Western Office: Jones & Sale, 1014 Garrick Bldg., Chicago.

Address all Mail to Editorial and Business Office



So Little to Pay

The panelboards represent only a small fraction of building costs.

So Much to Gain

They represent visibly the quality of all hidden work.

④ Panelboards are of standardized sectional construction, completely assembled, ready to wire and each fitted to a standardized steel cabinet. By saving cost on the method of manufacture and volume, more quality and workmanship can be put in the product and still have it sell for less than others.

④ Panelboards lower your cost by greater efficiency—and build your reputation by higher quality. Every part goes beyond the usual requirements, giving more in strength, more in contact area, and more in every detail of switch mechanism. They are so good in themselves that they index the entire wiring job, as is often expressed in "④ Panelboards are the Sign of a Better Job." It is easily understood why the contractor who always installs ④ Panelboards is known as the contractor on better jobs and is usually in line for the wider margin, finer work where quality is first demand.

④ Panelboards are not built to sell for less—but they do!

Send for New, Complete Catalog

Frank Adam
ELECTRIC COMPANY
ST. LOUIS

New York
Pittsburgh
Philadelphia
Cincinnati
Detroit
Indianapolis

Cleveland
Chicago
Kansas City
Dallas
New Orleans
Atlanta

Minneapolis
Denver
Seattle
San Francisco
Los Angeles
Winnipeg



The Electragist

(The National Electrical Contractor and The Electrical Contractor-Dealer)

Official Journal of the
Association of Electragists—InternationalS. B. WILLIAMS
EditorARTHUR L. ABBOTT
Technical Director

EDITORIAL ADVISORY STAFF

CODE
A. Penn Denton, E. E.
Member Electrical Committee N. F. P. A.INSTALLATION
Allan Coggeshall, E.E.
Vice President Hatzel & Buehler, Inc.POWER
William J. Shore, E.E.
Contracting Electrical Engineer

Vol. 24

SEPTEMBER, 1925

No. 11

Table of Contents:

A Welcome for All at West Baden.....	23
Red Seal Licenses in 298 Communities.....	24
Manufacturers Apply Overhead to Labor.....	25
The Peddler Points Out Some Leaks in the Contractor-Dealer Business.....	26
An Outline of Inter-Communicating Telephone Systems.....	29
A Manual of Accounting Practice for Contractors and Dealers.....	33
Electrical Manufacturers' Output Valued at \$1,375,467,131.....	34
"Safety First" in the Electrical Contracting Industry.....	35
How Kansas City Conducts License Examinations.....	37
Two Letters	39
The Elements of Theatre Lighting.....	40
Estimating for Electrical Contractors.....	44
Electragists You Should Know.....	48
An Analysis of the 1925 Code Changes.....	49
Unit Proposal Prices for Extras.....	53
Editorials	54
Association List	56
August Activities	58
Manufacturing	63

Published Monthly—Established in 1901

LAURENCE W. DAVIS, General Manager

IRVIN SHULSINGER, Advertising Director

Copyright, 1925, by Association of Electragists—International.

Entered as second-class matter September 1, 1919, at the Post Office at Utica, New York, under the act of March 3, 1879.

SUBSCRIPTION RATES

One Year, Domestic.....	\$2.00
Foreign Subscriptions, including Canada, per year.....	\$2.50
Single Copies	20 cents

Publication Office: 100 Liberty St., Utica, N. Y. Editorial and Business Office: 15 W. 37th St., New York City

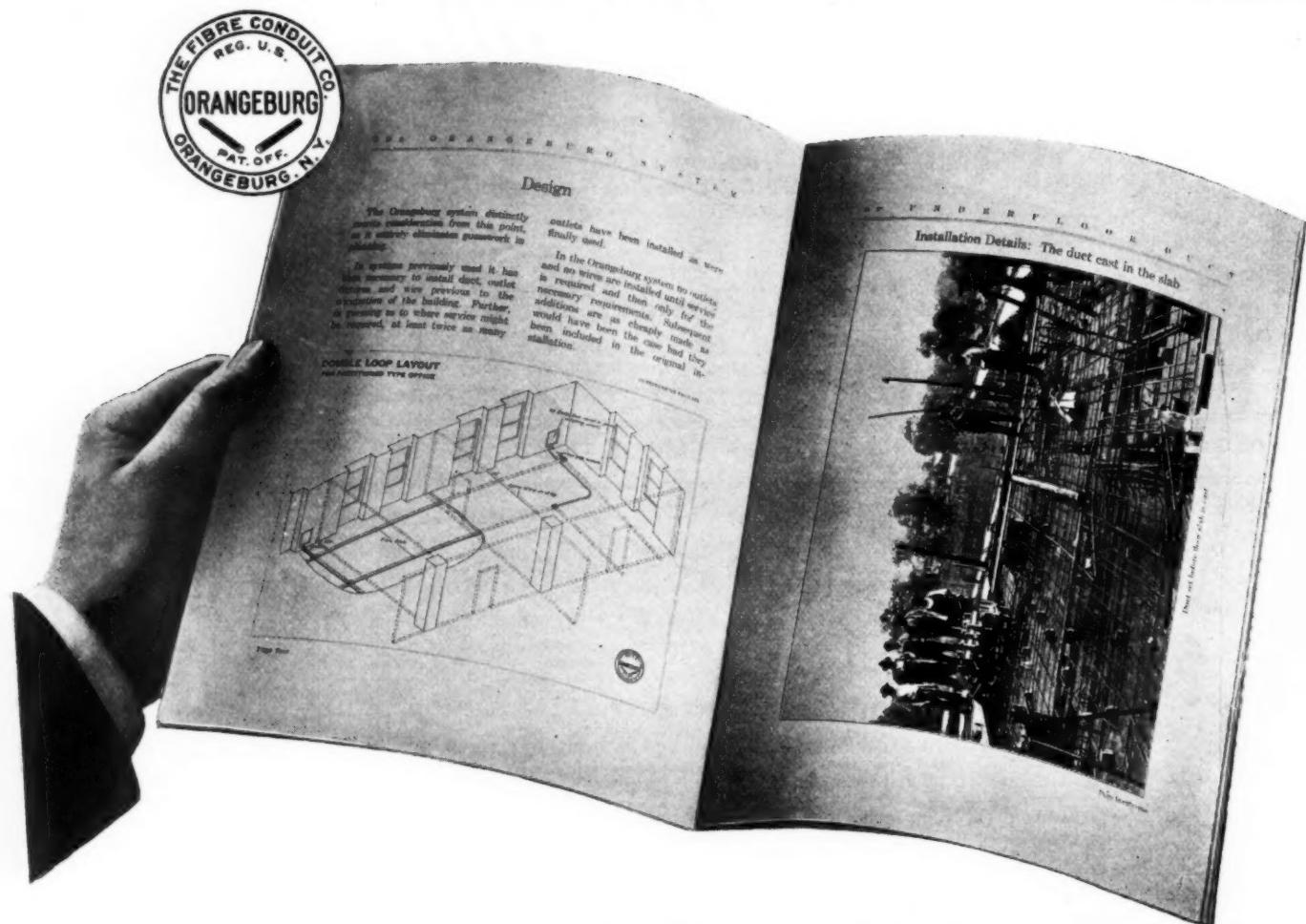
Western Office: Jones & Sale, 1014 Garrick Bldg., Chicago.

Address all Mail to Editorial and Business Office

ORANGEBURG

PATENTED
MAR. 17, 1925

UNDERFLOOR DUCT SYSTEM



Send for this Book



Showing Orangeburg Underfloor Duct in place before the floor is laid.

The Orangeburg Underfloor Duct System embodies important inventions which are the property of the Fibre Conduit Company and all rights therein will be vigorously enforced.

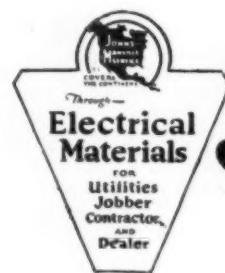
HERE is a manual giving complete information about the Orangeburg Underfloor Duct System. It describes the flexibility and ease with which new outlets may be established in an underfloor duct grid without disturbing old wiring or defacing the floor.

It contains interesting drawings, plans and detail photographs showing design, specifications, floor construction and component parts of this system which you should have for reference. Your request will bring a copy promptly.

The System makes guessing unnecessary in the beginning and provides for growth and changes without mutilation of walls or floors.

JOHNS-MANVILLE Inc., 292 Madison Avenue at 41st Street, New York City
Branches in 63 Large Cities.

FOR CANADA: CANADIAN JOHNS-MANVILLE CO., Ltd., Toronto



JOHNS-MANVILLE

Sole Selling Agent for
The Fibre Conduit Company, Orangeburg, N. Y.

The Electragist

(The National Electrical Contractor and The Electrical Contractor-Dealer)

Official Journal of the
Association of Electragists—International

S. B. WILLIAMS
Editor

ARTHUR L. ABBOTT
Technical Director

LLOYD M. THOMAS
Associate Editor

EDITORIAL ADVISORY STAFF

CODE
A. Penn Denton, E. E.
Member Electrical Committee N. F. P. A.

INSTALLATION
Allan Coggeshall, E.E.
Vice President Hatzel & Buehler, Inc.

POWER
William J. Shore, E.E.
Contracting Electrical Engineer

Vol. 24

OCTOBER, 1925

No. 12

Table of Contents:

Twenty-fifth Breaks All Records.....	13
President Fowler's Message a Challenge.....	17
The Strategic Position and Duties of the Electragist.....	19
Your Trade Policy in Practice.....	21
All Must Follow Trade Policy.....	22
Manufacturers' Exhibition.....	24
Responsibility of Dealers to the Buying Public.....	26
The Code—Past and Future.....	27
Committee Reports.....	29
The Electrical Inspector.....	31
Electragists You Should Know.....	34
An Analysis of the 1925 Code Changes (cont.).....	35
Estimating for Electrical Contractors.....	39
Editorials.....	42
Association List.....	44
September Activities.....	46
Manufacturing.....	50

Published Monthly—Established in 1901

LAURENCE W. DAVIS, General Manager

IRVIN SHULSINGER, Advertising Director

Copyright, 1925, by Association of Electragists—International.

SUBSCRIPTION RATES

Entered as second-class matter September 1, 1919, at the Post Office at Utica, New York, under the act of March 3, 1879.

One Year, Domestic.....	\$2.00
Foreign Subscriptions, including Canada, per year.....	\$2.50
Single Copies	20 cents

Publication Office: 100 Liberty St., Utica, N. Y. Editorial and Business Office: 15 W. 37th St., New York City

Western Office: Jones & Sale, 1014 Garrick Bldg., Chicago.

Address all Mail to Editorial and Business Office

A Scientific School Lighting Plan Leaves Out Eye-Killing Shadow



*Recitation Room in
Atlantic City (N.J.)
High School, sci-
entifically lighted with
MONAX No. 4138*

THE Cleveland School Board, in 1922, after investigating 123 Schools, disclosed that 74 were inadequately lighted. In order to remedy this condition and prevent the development of eye trouble among pupils, lighting manufacturers were invited to submit samples of their best units for the purpose.

Among the qualities considered in the study of these units were uniformity of distribution; density of shadows; degree of glare and depreciation due to dirt. The survey revealed that point for point, MONAX GLASS scored such a high average it was recommended for installation throughout.

MONAX GLASS, "The Shadow Chaser," is peculiarly adapted to school lighting as well as to other buildings where sharp shadow and harsh glare interfere with the efficiency and health of the occupants. It sprays a diffused light uniformly in all directions yet is brilliant enough to illuminate a wide area. The shape and construction of MONAX GLOBES not only prevent the rapid accumulation of dirt but make them easy to clean, insuring maximum lighting efficiency at all times.

*Ask our Illuminating Engineering Department to analyze
your lighting problems. Advice entails no obligation*

Macbeth-Evans Glass Company

(Eastern Division)

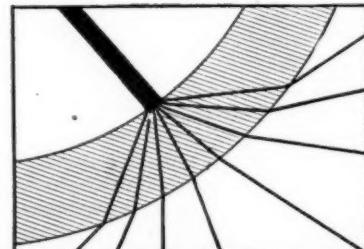
DEPARTMENT H

CHARLEROI, PENNSYLVANIA



MONAX GLASS

The Shadow Chaser
for Commercial Lighting



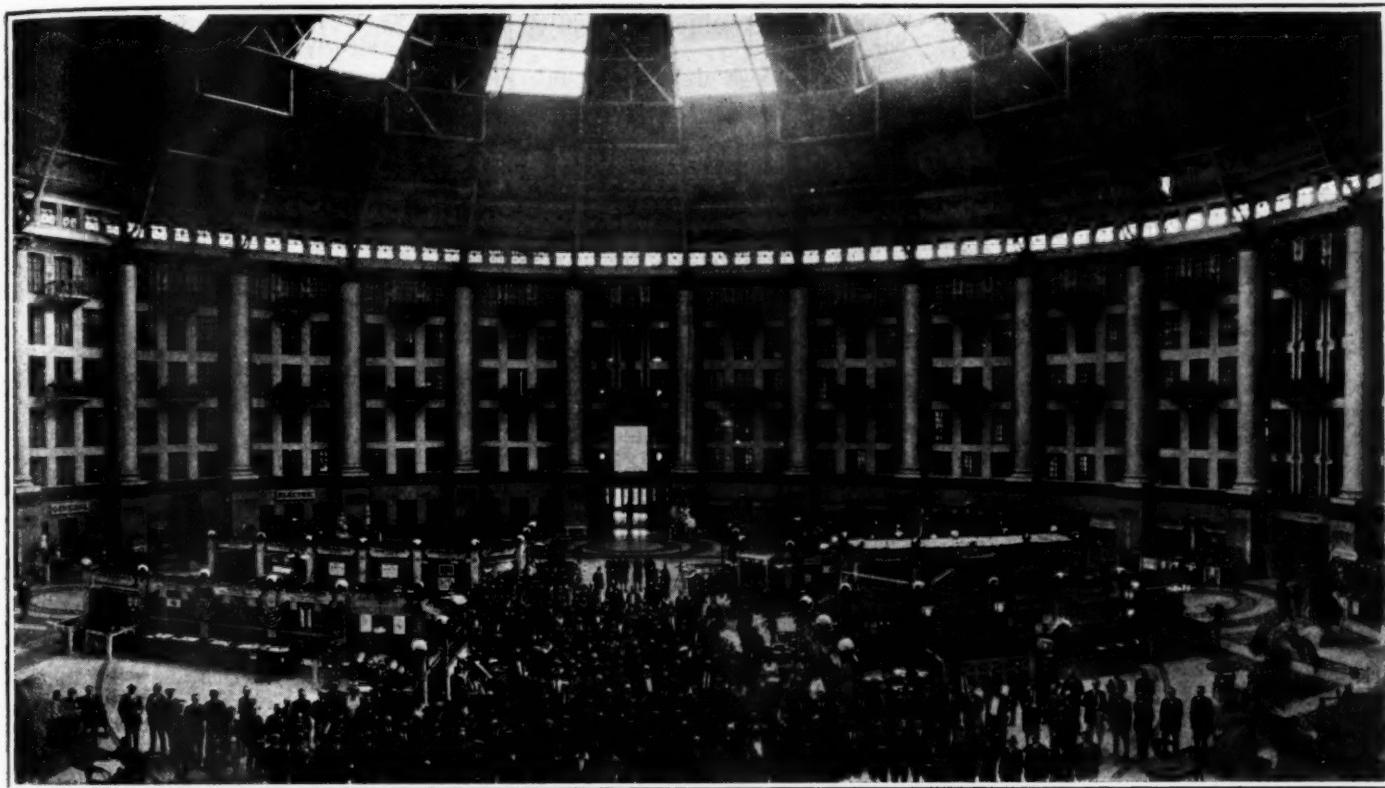
*As each ray of light is transmitted
through MONAX GLASS, it is
broken up and uniformly diffused in
all directions.*

November, 1924

Shelved w. 058
Ref. 621.3
The Electragist

abstract

11



The Electragists Face the Camera in the Famous Pompeian Court With the Manufacturers' Exhibit to Back Them Up.

Convention Big Success

**Twenty-fourth Annual Convention of Association of Electragists
at West Baden, Indiana, a Month Ago Shows Electragists to be
United on Development Policies of Large National Importance**

SELDOM has a body of men been able to accomplish more than was done at West Baden a month ago. There the Association of Electragists, International, was in session from September 29 to October 3, inclusive. There was hardly a phase of contractor-dealer activity that did not receive attention and for once it was possible to hear on all sides as the Friday trains began to pull out: "What a great Convention! We'll be back next year."

Well might it be called International, for this year Canada sent down eight men to tell us what they are doing, to get help on their problems and to lend a helping hand with ours.

Not only did a well balanced program help to make the Convention valuable, but this year there was an added attraction in the Manufacturers' Exhibit, the first to be held under the auspices of the Association in 19 years.

Forty-four exhibitors showed their wares to the 200 electragists who registered. Pictures of these exhibits and the names of the exhibitors will be found further on in this issue.

The program was arranged for recreation as well as for business, the mornings being given over to regular sessions, the afternoons to outdoor sports and the evenings to the special classes and to entertainment. Many, however, found that they would rather dispense with the sports so that every afternoon found numerous small meetings given over to the discussion of member's problems.

The Glad Hand Committee, which apparently has become a permanent feature of the Convention of this Association, was again in evidence under the able leadership of Samuel Adams Chase. They met all trains, helped the entertainment committee and took on a new role this year, that of policing the convention and seeing that delegates

didn't wander away when the convention was in session. The members of the Glad Hand Committee proved quite equal to the tasks assigned them.

As is customary the Executive Committee had its regular semi-annual meeting on the day prior to the opening of the Convention proper. At this time reports were heard from the various committees and the headquarters' staff. The general condition of the Association was shown to be better perhaps than it has been for years. These reports which later were submitted before the membership will be found abstracted further on.

The preliminaries were quickly disposed of at the opening session and the President, James R. Strong, made his annual address which after telling of the progress made during the year pointed out clearly the organization set up of the electrical industry and the relation of this Association thereto. Not only was this President Strong's



opening address, but it proved to be also his valedictory.

From 1905 to 1908 Mr. Strong served this Association as its president and again since 1920. At the close of his term of office next spring it is his intention to withdraw from executive work in the Association.

Secretary-Treasurer Laurence W. Davis presented the financial and operating details of headquarters work and showed that the membership had increased from a low mark in the spring of around 1,600 to 2,000 at the time of the convention, a gain of 25 percent.

A remarkably clear picture of the Local Code Committee and what it means to the industry was presented by A. Penn Denton, Chairman of the National Code Committee. This work which has developed since the last convention has gone forward with startling rapidity until at the time the report was made local code committees had been appointed in one hundred cities.

Under the head of legislation, the Chairman of that committee, E. C. Headrick, offered through R. W. E. Moore of the Casualty and Fire Prevention Committee of the Electrical Manufacturers' Council, the Uniform Electrical Ordinance. This ordinance, copies of which were distributed, was in three parts: The ordinance and one

supplement for licensing and another for fees.

Mr. Moore explained that this ordinance has been drawn up by attorneys for the Council in an effort to secure more uniformity of local ordinances in order to further the cause of standardization.

The ordinance is so drawn as to embody the National Electrical Code so that any changes will automatically become a part of the local regulations. This was felt to be a good thing and it was voted to endorse the principle of the Uniform Ordinance and to hold further conferences with the Council in order to make it as practical as possible.

Under the report of the Architects and Engineers' Committee, C. L. Chamblin, Chairman, the Red Seal Plan was outlined by W. L. Goodwin of the Society for Electrical Development which is promoting the plan in the United States. This plan was held by those in attendance to be a most constructive way to improve the quality of electrical installations in houses.

Distribution and Merchandising policies was the topic for the session during the second morning. After listening to the report of W. Creighton Peet, Chairman of the Trade Policy Committee, the convention had the pleasure of listening to some remarkable presenta-

tions of this topic by W. R. Herstein, President of the Wesco Electric Supply Company, Memphis, jobber; George R. Purvis, Assistant to the President of the Hurley Machine Company, Chicago, and Albert Wahle, President of the Albert Wahle Company of New York.

Mr. Herstein took the report of the Trade Policy Committee which was released in July and which pointed out the reasons why electragists were not being rewarded adequately for service and analyzed it from the point of view of the jobber. While at times it was noticed that it made some of his hearers wince still it was the consensus of opinion that it was a very fair document and very ably presented.

From the view point of the appliance manufacturer distribution has its problems outlined by Mr. Purvis.

Mr. Wahle received considerable applause for his reasons why the electragist should encourage right principles of distribution by patronizing only those who had such a policy. Mr. Wahle was especially emphatic that merchandise should flow through the regular channels of distribution without any by-passing.

The subject proved too much for one day so that on Thursday John F. Gilchrist, Vice-President of the Commonwealth Edison Company of Chicago, and F. W. Greusel, President of the



Everybody Gets Together Just Before the Electragist Convention.

G-Q Electric Company of Milwaukee, presented papers.

Mr. Gilchrist pointed out that the present margins will not permit an electrical dealer who is attempting to create a demand to stay in business unless he has some other business with it. He cited the figures of some of the larger central stations in support of his contention.

The Milwaukee plan of creating business men amongst contractor-dealers was outlined by Mr. Greusel. The basis of this plan is the use of the Standard Accounting System and Mr. Greusel assured the convention that the results have been very definite both for the jobbers and for the contractor-dealers. Incidentally the work is self-supporting.

From the discussion of the floor it was plainly evident that the members were not satisfied with present margins, the policy of the manufacturer in fixing list prices and so determining the dealer's profit, and with the policy of the manufacturer in not taking this matter up with the trade in such a way that these ills might be righted.

A strong resolution was endorsed urging the Association to continue its efforts to bring about these ends.

Technical Papers

Two papers on "Handling the Big Job," one by O. F. Wadleigh of the Sanborn Electric Company of Indian-

apolis, and the other by Allan Coggeshall of Hatzel & Buehler, Inc., of New York City, caused a lot of discussion.

The former took the topic up from the angle of system and told of the system of his company. He closed with a very significant thought that when

Mr. Coggeshall was not able to be present so his paper was presented by his associate, Robert A. Goeller. His thought was that contractors are really

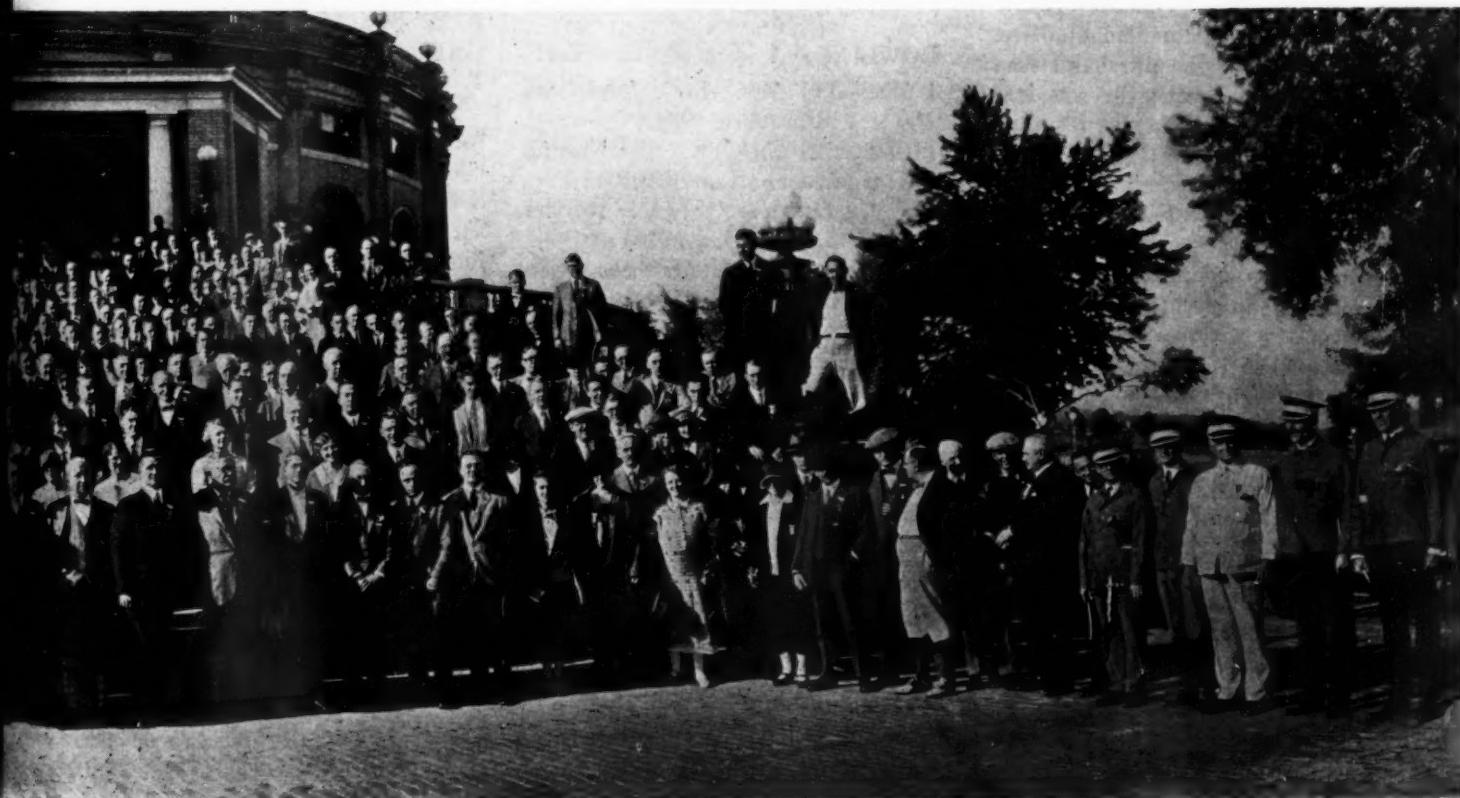
not installing wiring, but better production and that the big job should be tackled from this side. He emphasized the subject of load factor and its bearing on the layout and design of any large electrical system.

This idea was eagerly discussed in reference to the Code rules and it was apparent that many were of the opinion that the Code did not take load factor into consideration under the 15 amp. rule. The concensus of opinion, however, was that on big work economy of copper required careful figuring for load factor.

In the absence of George P. Svendson, President, Boustead Electric and Manufacturing Company, Minneapolis, his paper on "Managing the Motor Repair Business" was read with comments and additions by L. M. Atkinson of Pittsburgh, Kansas. The greatest em-



The Glad Hand Committee Looks Pleasant at the Command of Its Chief, Samuel Adams Chase



Jobber-Manufacturers Clash on the Baseball Diamond

phasis was laid upon the necessity of keeping accurate costs and in this connection the Standard Cost Accounting System was again favorably commented on.

Knowledge of costs, according to Mr. Svendson, is absolutely essential if a motor repair shop is to be successful.

At the closing session L. G. Ross, Chairman of the Standardization Committee, presented the results of his questionnaire as to the advisability of stocking black conduit and on the sizes of knockouts in outlet boxes.

The Committee's recommendation that white conduit and fittings only be manufactured and stocked was adopted.

P. B. Zimmerman, Vice Chairman of the Lighting Educational Committee, and Kenneth MacIntyre of the Society for Electrical Development presented a clear cut and complete picture of the Home Lighting Contest, publicity on which has been appearing regularly in these columns.

A rather refreshing talk because of its frankness was made by R. M. Klein, General Manager, F. A. D. Andrea, New York, who took as his topic "Retailing Radio at a Profit." Mr. Klein presented a number of "do's" and don'ts" which will be found elsewhere in this issue.

The concluding paper was by Lynton T. Block of St. Louis on the topic, "Tendency Toward Monopolistic Insurance." Mr. Block made it quite clear that although state monopolistic rates might be low the purchaser was making no saving because he was losing service that he had been accustomed to receive.

As the convention was about to close Joseph A. Fowler, Chairman of the Resolutions Committee, summed up the convention in an admirable resolution which made it apparent that the four days of meetings were decidedly well worth while.

One of the innovations of this Convention was a series of evening classes. These were informal, the conductor delivering a short paper and following by answering innumerable questions.

The first on "Financing, Credits and Collecting" was conducted by R. J. Greil of the Commercial Investment Trust, Inc. The second, "Buying, Stocking and Selling," by M. C. Turpin and J. A. Clarke of the Merchandise Department of the

Westinghouse Electric and Manufacturing Company and the third on "Code Problems of the Contractor" by A. Penn Denton, Chairman of the National Code Committee.

A fourth class on "Estimating" was held on Wednesday and Thursday evenings and Friday afternoon by Arthur L. Abbott, Technical Director of the Association.

The two labor sections met and after discussing plans elected officers for the new year.

Each afternoon was given over to sports under the general chairmanship of A. I. Clifford, who was assisted in golf by Henry Victor; tennis, T. F. Hatfield; billiards and pool, R. H. Jenkins; bowling, K. E. Nutting; baseball, T. H. Bibber.

Prizes were awarded winners as follows:

GOLF:

Low Net Score, 36 holes—J. P. Coghlin (Gold Medal).

Low Gross Score, 18 holes—H. R. Victor (Gold Medal).

Kicker's Handicap—A. Stewart (1 Doz. Golf Balls), E. B. Coghlin (1 Doz. Golf Balls).

Low Net Scores: W. G. Street, watch fob; J. W. Collins, watch fob; G. M. Sanborn, watch fob; W. T. Hopkins, watch fob; J. R. Strong, watch fob; P. B. Zimmerman, watch fob; W. C. Peet, watch fob; Floyd Smith, watch fob.

BOWLING:

Ladies—(1) Mrs. H. C. Adolphsen, Milwaukee (98).

(2) Mrs. K. E. Nutting, Muncie, Ind. (81).

(3) Mrs. F. O. Broyles, Marion, Ind. (76).

Men—(1) H. L. Matthews, Winnipeg, Ont. (194).

(2) H. F. Janick, Rochester, N. Y. (143).

(3) O. A. Robbins, Columbus, O. (126).

(4) A. P. Peterson, New York City (122).

- (5) W. U. Scott, Kokomo, Ind. (114).
- (6) F. O. Broyles, Marion, Ind. (106).

BASEBALL:

Manufacturers-Jobbers, 14; Electragists, 8.

Considerable praise was heard on all sides for the excellency of the exhibits. The committee of which G. M. Sanborn was chairman, was composed of W. Creighton Peet, Frank E. Watts, W. G. Campbell, Samuel A. Chase with A. L. Abbott in charge of exhibits.

There were forty-four exhibitors displaying quality merchandise and based on this year's experience, plans are already being laid to make next year's exhibit even more extensive and valuable alike to the manufacturer and the electragist.

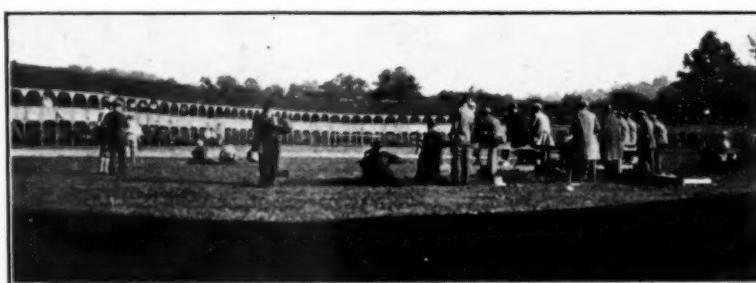
There was some form of entertainment each evening which generally included some instructive moving pictures loaned by one of the manufacturers. The climax came on Thursday evening with an impromptu Costume Ball.

Credit for the entertainment of the ladies goes to Mrs. K. E. Nutting, Mrs. T. B. Hatfield and Mr. A. I. Clifford, Chairman.

Then as the trains pulled out the Glad Handers were there to say "Good-bye" headed by Samuel A. Chase who was assisted by Charles M. Beltzhoover, A. L. Swanson, T. F. Hatfield, Hugo Tollner, N. L. Walker, J. J. Caddigan, T. H. Bibber and J. Walter Collins.

"West Baden Again" is the slogan for the 1925 Convention, the Executive Committee having decided at its final meeting on Friday that no more ideal surroundings can be found for both a business and a recreational gathering. Experience had shown that the great Pompeian Hall in the center of the hotel offered unexcelled facilities for the Manufacturers' Exhibit and praise was heard on all sides for the hotel cuisine and service.

The coming convention will have a program somewhat differently arranged than the 1924 meeting. It has been tentatively arranged to hold an Executive Committee meeting on Monday, Sept. 21, with business sessions on the following two days and a half. Thursday afternoon and Friday would then be devoted to sports.



The Baseball Teams Do Their Stuff

President Strong's Valedictory*

The Association is growing stronger and the membership is increasing.

Its relations with other organizations are most cordial.

It is here to stay and grow stronger, provided members do not forget their obligation to do their share in developing the industry.

YOUR Association like other trade associations and business houses has felt the business depression of the last few years but notwithstanding this you are in a stronger position than ever before.

Your membership shows an increase of nearly 400 since the last report in March. You owe nothing except current bills and the small bond issue of last year and you have sufficient funds in hand to meet your current obligations. Your publication, THE ELECTRAGIST, is better than it has ever been and is continually growing and improving. You are to be congratulated on the splendid executive staff whose able and untiring work from the manager to the office boy has made this result possible.

However, let no one get the impression that the funds at our disposal are sufficient to carry on the great work which this Association ought to be doing. The possibilities of research work and the gathering of statistics by our Technical Department are unlimited.

The more rapid growth of our publication means greater expenditure.

The personal contact of our field man with non-members and members does more than anything else to sell the association and keep it sold and the advice and assistance of the expert field man in the solution of the member's problems is one of the greatest benefits of membership.

I realize that I am speaking to those who by their presence here have shown an interest in the work of the association and for this interest I am thankful, but what of the larger portion of our

membership who are not present?

Is it not true that the majority think somewhat like this?—

I pay my dues. I cannot be bothered with reading the printed stuff they send me.

I know how to run my business.

They cannot teach me anything.

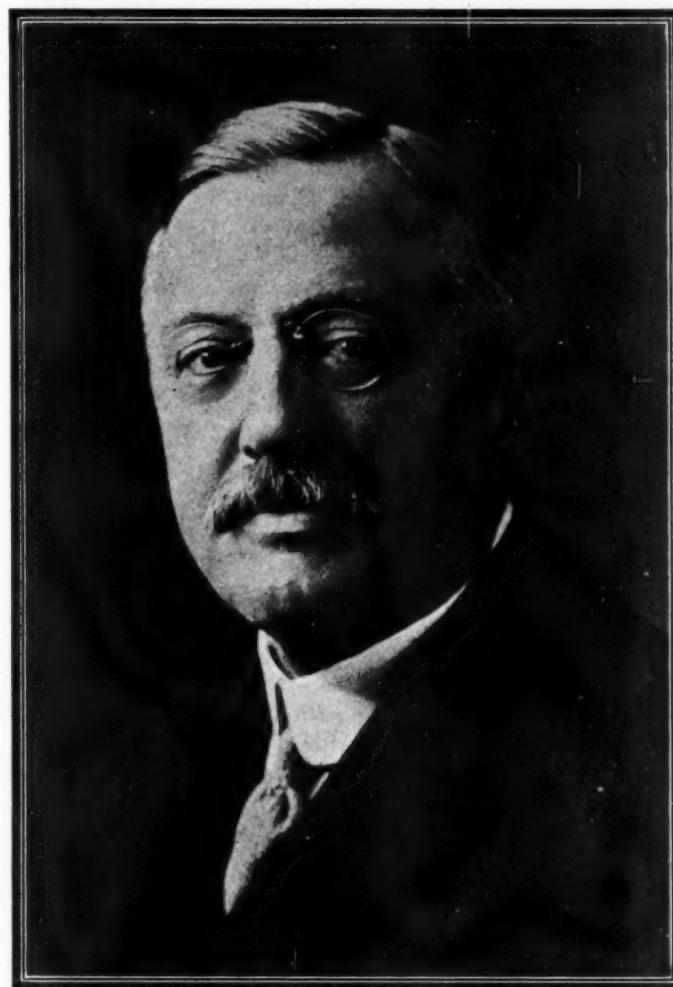
Why bother with overhead while this price cutting is going on? etc.

My friends, I realize that in association work the appeal is on an entirely different basis from the appeal for church, charity or even patriotism where unselfishness and generosity control.

I hold that the commercial association is organized for the purpose of improving the business conditions of its members and thereby enabling them to have more money in the bank at the end of the year.

Selfishness and self improvement are the controlling factors and should be. We ask for increased membership not only because of the increased funds resulting but because of the improved business conditions resulting as the educational work of the association reaches a greater number. We ask for replies to our questionnaires in order that the exchange of commercial and technical data may benefit you personally.

We ask your attendance at the Convention and meetings in order that you may benefit by the experience of others; that you may meet those with whom you



James R. Strong

compete and from whom you buy and be personally benefited by this contact.

We ask your support of our magazine, THE ELECTRAGIST. Read it, contribute to it and extend its circulation, have your superintendents and foremen read it. It will give them much information on which you can cash in.

Many inquiries have been received as to the status of the labor section of the Association and the subject has been carefully studied. It was thought at one time that part of the Association funds might be diverted to the use of either section. We are advised, however, that under our present constitution it is necessary that funds for either section must be provided by the section independent of Association funds.

It must be remembered that membership in the sections is voluntary and that many members do not desire to affiliate with either section. I think that most of you will agree with the statement that the Association did a wise thing when it removed the subject of

*Address presented at 24th Annual Convention, A. E. I., West Baden, Ind.

labor from the floor of the Convention. Our relations with the national organizations of our industry are most cordial and we are becoming more and more a part of the picture.

During the year we have held conferences with committees of the Manufacturers Council, attended meetings of the Electrical Supply Jobbers Association and sat with the National Executive Committee of the N. E. L. A. We are part of the Joint Committee for Business Development, the Lighting Educational Committee, The Society for Electrical Development and the Conference of Electric Leagues at Association Island.

Grouping of Organizations

Any attempt on my part to analyze the functions of all these associations would extend this report to a point beyond your endurance but I trust you will bear with me in an attempt to place before you my ideas as to the national and local organizations of our industry.

National Organizations:

- I. A group organization for each branch
- II. A joint advisory board
- III. A joint business building organization.

I. The group organizations such as the N. E. L. A.—the Association of Electragists—the various associations of manufacturers and the Electrical Supply Jobbers Association, should confine their efforts to the problems peculiar to their group, the solutions of which benefit their own members and do not effect the members of other groups. The group organizations should be content with this and should not enter into the work of other groups on work of a general character. Group organizations should not solicit considerable sums of money from members of other groups on the theory that it is doing work for the general good. Work for the general good can only be done successfully and without jealousies by an organization in which all are represented.

II. A joint advisory board, purely representative in character is needed wherein the national group organizations can confer through official representatives and find the solution of the many problems which are retarding the development of our industry. There are dozens of such problems awaiting solution; suffice it to mention three:

- a. Customer ownership of Electrical utility securities as insurance against municipal ownership.

- b. A proper system of retail distribution.
- c. Regulatory legislation.

The Joint Committee for Business Development organized two years ago was designed to do this work but in my judgment failed of any notable result for three reasons:

1. It was not entirely representative of national group organizations.
2. It was dominated by one group organization.
3. It endeavored to set up a national organization of its own which was unnecessary and a duplication of other organizations.

The plan of organization recently adopted by the Joint Committee is, to my mind, fundamentally right. The committee will be advisory only and will officially represent all national groups.

I have every confidence that it will act wisely and conservatively and will become a power for the good of the industry.

III. A joint business building organization we have in the Society for Electrical Development. Organized more than 10 years ago it has been working steadily and consistently to sell the idea "Do It Electrically." As disperser of publicity and organizer of campaigns it has accomplished much and as the promotor of local leagues it will do much to advance local business building. You are to learn at this convention of the society's latest production, the Red Seal which I know will interest you. I earnestly commend the society to your serious consideration.

A new national movement recently started called the Lighting Educational Committee is built around a fine idea which is to improve the lighting of the home and to do it through an essay contest among the school children. It is the intention of the promotor of the plan that this should be a temporary organization to put over this campaign during the last three months of this year. You will hear of this plan in detail later in the convention. I ask your hearty support of the movement.

Local Organizations

We need two kinds of local organization:

- I. The group organization for each group corresponding with the national.
- II. The electric league, club or board of trade, a business building organization along the lines

of the Society for Electrical Development and affiliated therewith.

The description given above of national organizations makes unnecessary a further description of these local bodies.

And now my friends as this is my valedictory as president at a convention of this great organization I trust that a few remarks of a more personal character will be permitted.

I have been connected with the Association game for thirty-four years, and with this Association for twenty-three years and I have never regretted the time and thought which I have fortunately been able to devote to the work.

"Live and Help Live"

I have devoted this time because I believe in the "Live and Help Live" theory of life. I believe that only through the association of ideas and good fellowship can our business be put on a proper basis.

I believe that our name *Electragist* can be made to stand for something.

I believe that this Association is here to stay and will continue as long as the business continues even though we should light our buildings by wireless. We are a necessary part of the electrical industry.

At the recent Conference of Electric Leagues at Association Island, which I attended, the subject under discussion was "What Can the League Do for Contractors?" The discussion, which brought out much interesting information regarding the improvement of contractors as business men, was interrupted by an ill-advised individual who abused the contractor without limit. You would have been glad to see our champions rise on all sides and verbally smite him. You will also be glad to know that later he was thrown in the lake.

Let it not be forgotten the obligation rests on us to do our share in developing our industry. We must not expect to sit idly by and have profit thrust at us. We must learn how to develop turnover, care for our stock, and sell our goods, etc., if we expect to outstrip the department store and others outside the industry.

My friends I hope you will pardon this lengthy discourse and believe that it comes from a full heart and with the sole purpose of doing what I can to improve our industry. I wish you God-speed. I ask that you work and play with equal fervor and through it all, let the keynote be Goodfellowship.

Value of the Local Code Committee*

By A. PENN DENTON
Chairman of National Code Committee



THE work of the Code Committee of this Association during the past four years, and particularly that period during which this Committee was engaged in the revision work of the 1923 National Electrical Code, developed the need for a local contact between the inspection department in the cities of this country and the electrical industry. After a careful study of the existing conditions in several of our larger cities our Association of Electragists, having regard for the proper enforcement of local ordinances and the National Electrical Code, decided to undertake a program of organizing local committees which could function along co-operative lines, the personnel of these committees to include representatives of those interests which actually make contact with the public.

A Local Code Committee is a rather mysterious thing to most electrical men who have not been in touch with this Association's work, whereas it should be one of the best known and most im-

portant co-operative groups functioning within the industry.

What is it the electragist needs most when he undertakes to sell a first class electrical installation? The installation



A. Penn Denton, Chairman National Code Committee

of electrical work may be the wiring and equipment in a five room bungalow, or it may be an installation in a twenty story office building involving every kind of wiring material and construction equipment in use today. We will assume that this electragist has a well organized company which combines capital, experience and all other requisites which will place him in the class of the legitimate contractor and a good business man. He may have every necessary qualification as a business man, including a splendid reputation and a well established business, but if he lacks one certain thing he cannot conduct a satisfactory or successful business. This most important and necessary attribute to his business is FAIR COMPETITION. How can he be guaranteed that?

Fair competition can be guaranteed to the electragist through support of his business efforts by the co-operation of the electrical industry and the inspection department in each municipality. Their co-operation can be best given by aiding in obtaining for the electra-

*Address presented at 24th Annual Convention, A. E. I., West Baden, Ind.

gist these factors which are necessary to his success:

First, in order for the electragist to submit an intelligent figure or estimate covering any class of electrical installation, he must be given a well designed and well specified wiring layout.

Second, the electragist must have the assurance and moral support of the electrical men and the inspection interests, that when he figures the job the owner or his architect will expect him to furnish exactly what the wiring plans and specifications call for, and require him to live up to the letter as well as the spirit of these specifications.

Third, the final and perhaps most important of all, the local inspection department having jurisdiction must require of this contractor's competitor the same careful observance of installation standards. There should be an enforced penalty against any contractor or electragist, placed upon him by the local inspection department, if he fails to install any job other than according to the well designed and specified layout according to which all contractors bidding on the job originally figured. To permit the inspection department to enforce this penalty, it naturally will devolve upon the inspection department to review and pass upon all wiring plans and specifications for all classes of buildings, before the job is started and before the wiring permit is issued. This requirement is one of the things which co-operative electrical and inspection groups can and must insist upon.

This Association believes that the organization of a Local Code Committee in every city and town throughout the country, backed by a united electrical industry can absolutely assure such an improvement in the standards of electrical installations that the illegitimate or curbstone contractor can no longer compete.

An example of the value of the local code committee to the electrical industry is best illustrated in taking the actual results obtained by one of our first committees organized. A certain city about one year ago organized a committee at just the time the 1923 code was issued and at the first meeting it was unanimously agreed by all that they should immediately accept these latest rules.

The first subject discussed was brought up by the representative of the central station. He asked that the committee consider the use of the standard-

ized safety type service switch, with locking cabinet and meter trim. Its advantages so impressed the other members of the committee that it actually took just three meetings of the committee, one of these a joint meeting with the local contractors association, to arrange for the adoption of this type of service switch.

FIRST 100 CITIES TO ORGANIZE A LOCAL CODE COMMITTEE

STATE AND CITY	STATE AND CITY
ALABAMA Birmingham Mobile Montgomery Tuscaloosa	Minneapolis St. Paul Winona
ARKANSAS Hot Springs Little Rock	MISSISSIPPI Gulfport Hattiesburg Jackson Vicksburg
CALIFORNIA San Francisco	MISSOURI Kansas City Springfield St. Joseph St. Louis
COLORADO Colorado Springs Denver Pueblo	NEBRASKA Lincoln Omaha
CONNECTICUT Hartford New Haven Waterbury	NEW JERSEY Newark Red Bank
FLORIDA Fort Pierce Jacksonville Miami Orlando Tampa	NEW YORK New York City
GEORGIA Atlanta Columbus Savannah	NORTH CAROLINA Charlotte Gastonia Raleigh Winston-Salem
ILLINOIS Alton Decatur East St. Louis Galesburg Springfield Peoria Joliet	OHIO Columbus Dayton Springfield
INDIANA Indianapolis Terre Haute Richmond	OKLAHOMA Muskogee Oklahoma City Tulsa Okmulgee
IOWA Cedar Rapids Davenport Des Moines Fort Dodge Dubuque Waterloo Sioux City	PENNSYLVANIA Pittsburgh Wilkes-Barre
KANSAS Kansas City Pittsburgh Salina Topeka Wichita	SOUTH CAROLINA Charleston
KENTUCKY Louisville	TENNESSEE Memphis
LOUISIANA Shreveport New Orleans	TEXAS Dallas Fort Worth Houston Beaumont Galveston Austin San Antonio Port Arthur
MARYLAND Baltimore	VIRGINIA Newport News Norfolk Richmond
MASSACHUSETTS Boston Worcester	WISCONSIN Milwaukee Sheboygan Superior
MINNESOTA Duluth Faribault	DIST. OF COLUMBIA Washington
	CANADA Toronto Vancouver, B. C. Winnipeg

The same code committee next undertook to decide upon a uniform method of grounding, both the electrical system and the electrical equipment; this being another improved rule of the 1923 code.

It took a little longer for the committee to agree upon this rule, but with the final result that the inspection department has made a mandatory rule on grounding which requires each electrical system and the equipment to be separately grounded and both grounds attached with approved ground clamps on the service side of the water meter.

The third matter taken up by this code committee was the rule requiring all branch circuit light wiring to have an identified or white wire for the neutral or grounded conductor of every circuit. It was necessary to determine what manufacturers were making this identified wire and further, arrangements had to be made with the jobbers to allow them ample time in which to stock it. Today this city's inspection department requires the use of the identified wiring on every class of light wiring.

Thus you see that the co-operative spirit combined with careful and conscientious teamwork between the electrical interests and the inspection department have placed electrical installations in this city on a super-standard basis.

In closing I wish to speak of our program for an all-metal code for electrical installations in all classes of buildings. The adoption of a resolution by our last convention at Washington last year provided that this association aggressively undertake to obtain an all-metal standard in electrical installations, throughout this country and Canada. We have made really remarkable progress in this connection, in the space of one year's time. There are today seventeen cities using the all-metal code, of which number six have adopted it within the period since our March Executive Committee meeting. What has been accomplished here and even more can be accomplished in all other towns and cities of this country. Is it not worth the effort required which after all does not seem to me much for our industry to give? Let us go forward.

We shall surprise ourselves and the electrical industry during the coming year in the rapidity with which the larger cities of this country adopt the all-metal electrical installation standards. This is the only possible installation of electric wiring which can guarantee to the public using electricity, absolute safety through a grounded system, both from the stand-point of safety to life and the fire hazard.

Merchandising Report Discussed from All Angles

Representatives of Contractor-Dealers, Manufacturers, Jobbers, and Central Station Interests Give Their Views on Question of Distribution

WITH the report of the Trade Policy Committee, presented by W. Creighton Peet, as a basis of discussion, the session of October 1 was a forum for the consideration of distribution questions. The viewpoint of all sections of the industry was presented and after discussion from the floor the convention voted that the report be approved and that the committee be instructed to proceed with the work of securing adequate compensation for electrical dealers and solving other problems existing in the relations between manufacturer, jobber and dealer.

The rendering of a satisfactory retail service, Mr. Peet declared in his report, whether it is that of the contractor installing the equipment and materials of the manufacturer or a retail store selling his appliances, must receive recognition and adequate compensation if the retail service is to maintain a proper growth and efficiency. The problem faced by the Committee, he said, was to find remedies for some of the ills and to start action to secure a smoother, better-balanced distribution of electrical goods through the proper channels as well as a more adequate compensation for retail service.

In the report it was noted that through the influence of the Association certain central stations which, it had been the impression, were about to enter the contracting field, gave to the

contractors in their vicinity assurance that the work would consist only of putting on wiring sales campaigns and that the actual business resulting would be turned over to the contractors. The Committee urged that contractors submit to it all cases where it can be proven that central stations have put on wiring campaigns in a way that developed cheaper and poorer competition by irresponsible wiremen, so that the real facts might be presented to the central stations responsible and a mutually satisfactory solution arrived at.

A paper on "Wholesale Distribution" was presented by W. R. Herstein, president, Wesco Electric Supply Company, Memphis, and chairman, policy committee, the Electrical Supply Jobbers' Association, immediately following the report of the Committee. It is printed in the pages following.

George R. Purvis, assistant to the president, Hurley Machine Company, Chicago, treated the Merchandising Report from the viewpoint of the manufacturer. The maker of appliances, according to the speaker, is as anxious to get down to fundamentals of distribution and solve the problem satisfactorily as is the contractor-dealer.

The importance of policy and policy strictly adhered to by the manufacturer, jobber and contractor-dealer was emphasized in the address of Albert Wahle, president, the Albert Wahle

Company, New York City, who spoke on "The Electragist's Place in Distribution." Mr. Wahle's contention was that those contractor-dealers who operate on the policy of handling quality merchandise and going after business on a quality basis have a right to demand policy of their distributors and manufacturers.

On the following day John F. Gilchrist, vice president, Commonwealth Edison Company, and vice president, N. E. L. A., reiterated the views he had expressed before the Atlantic City convention of the latter body. Only in cases where the sale of appliances was carried on as a side issue to a larger business, he declared, could such a business be done under present conditions. In other words, he continued, it was impossible for the average business man, under average conditions, to establish a business exclusively devoted to the sale of electrical appliances and make a go of it. He expressed the belief that the present margin between the cost of manufacture and the consumer's price was insufficient and that the business would not expand healthily until this condition was changed.

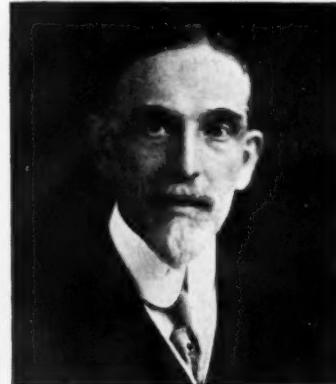
From the discussion on the floor it was evident that the delegates were in agreement with the contentions of Mr. Gilchrist and the Trade Committee was instructed to continue its work to right these ills.



W. Creighton Peet



John F. Gilchrist



Albert Wahle



George R. Purvis



W. R. Herstein

W. R. Herstein presents

The Jobber's View-point on Merchandising Poli- cies as They Affect Electragists

An Important Contribution to the Work of Solving Distribution Problems by the President of the Wesco Electric Supply Company, Memphis, and Chairman, Policy Committee, Electrical Supply Jobbers' Association.*

AS I understand from your general manager, I am requested to discuss from the standpoint of the wholesaler, the bill of particulars presented by your Special Committee on Merchandising Policies. For that reason I will avoid generalities as far as possible and confine my remarks to the specific points presented by the committee in its widely published report entitled "Reasons Why the Electragist Does Not Receive Adequate Reward for Service."

A critical observer might point out to the committee that the term "reward" is not sufficiently defined in the title or in the subject matter of the report. Does the committee have in mind the immediate reward for service involved, namely the difference between cost and selling price; or that less definite but more desirable reward expressed in terms of financial and social standing after the dealer has been subjected to the test of business for a number of years and is nearing the twilight of his active career? The latter depends largely but not wholly upon the former. Liberal trade discounts will go a long way toward developing success in business but the ultimate result depends upon the conduct of the business itself; hard work, sustained effort, the exercise of all the intelligence with which nature has endowed us, thrift, economy, square dealing; in short, personality, governed by self-control. I mention this distinction because it opens the way for two

separate trends of discussion; one involving immediate arguments between contractor-dealers, jobbers and manufacturers as to costs and discounts; the other contemplating combined effort on the part of the industry to see that in the long run each member is rewarded consistently with the part he has played and the manner in which he has played it.

A fair-minded consideration of the report must assume that the committee had both these aspects of reward in view; and fortunately the seven points specifically covered by the report are wide enough in range to permit discussion of the questions of both proximate and ultimate rewards.

With this promise, I shall now take the committee's specifications, point by point, and discuss them from the plane of the jobber; and when I say jobber, please bear in mind that I use the word in its plainest and simplest sense, as I understand it. It precludes the idea of a jobber being anything else; either retailer, contractor, manufacturer, broker, engineer, or any of the other functionaries making contact with the industry. Possibly some of my remarks may sound harsh and smack of intolerance, but I appreciate as well as the members of the committee, the disasters precipitated upon the industry by a lack of regard, by one branch, for the rights and interests of the others, and I have little patience for the transgressor, whether he be manufacturer, jobber, contractor or central station operator.

Since some of you may not distinctly

recall the details of the Committee's report, I shall prefix its several items, number by number, to the different sections of this paper, in order that the application of my remarks may, perhaps, be clearer.

"1—That manufacturers and wholesalers are selling direct to consumers, materials and equipment that require the functions of the electrical contractor to install, placing the burden of responsibility for satisfactory operation on the contractor through whom in the normal course of business the sale should be made."

The first specification in the report refers principally, I take it, to the sale of power equipment, a line of material with which most jobbers have very little to do. The majority of jobbers have long realized that whoever sells apparatus to a consumer assumes, either voluntarily or involuntarily, an obligation to service the apparatus for an indefinite length of time. The pitifully small discounts accorded the jobber on this class of material provide compensation neither for servicing nor for the intensive sales effort usually accompanying such transactions. Even the gross profit earned by the contractor is inadequate and must be supplemented by a profit on the work of installation. I do not believe, therefore, that the jobber is very largely an offender on count No. 1 of the indictment, and if he is, the taking of the business acts as its own punishment. So far as the manufacturers are concerned, my observation has been that competition between them

*Address presented at 24th Annual Convention, A. E. I., West Baden, Ind.

on power equipment is very keen. When three or four of them go into the ring together, the result is a battle royal, and any jobber or contractor who takes a hand in the fight is only inviting an inevitable knockout.

If it affords you any consolation, you may be interested to know that you are not alone in this particular complaint. Those of you who read the trade journals may remember a letter from an electrical engineer recently published in the *Electrical World*, lamenting the encroachment upon his profession by outsiders. He pointed out the engineering services given free of charge by manufacturers and salesmen of power apparatus to his clients, thereby excluding him from participation and annulling the value of his services; and was especially vehement towards the electrical contractor, who, it seems, is willing to donate engineering advice for the purpose of securing the sale and installation of the goods.

Whether this condition of mutual recrimination will ever be ended is problematical, but the industry is comparatively young; bright minds are engaged in it, and it is not inconceivable that a solution may be found through the proper use of the trade organizations now existing in the industry.

"2—That manufacturers and wholesalers are selling direct to consumers, materials and equipment to be installed by the consumer, where the consumer is not competent to make such installations."

If I have succeeded, as I hope, in satisfying you that the majority of jobbers are not guilty on the first point brought up by the committee, I am compelled to admit that the second point is more embarrassing. Not embarrassing because the jobbers are willfully guilty of being unfair to the contractor-dealer, but because of the wide twilight zone that exists between what the jobber should and should not do. The jobber's very existence depends upon his low operating expense. Industry will not pay him the percentage of profit it pays the retailer, and the larger his volume of sales per customer, the better chance he has to survive. His interest lies in reaching a large number of consumers through a small number of retailers. There is unquestionably a large amount of industrial business handled by every jobber through his dealers, and which the jobber is genuinely glad to receive in that way, with no desire to go into competition for it.

Industrial business, as it concerns electrical materials, may be roughly grouped into three classes; first, the character of business I have just mentioned, where the buying is always small and lends itself easily to retail practices. Secondly, where the buying is on a very large scale, competition more or less keen, and the volume ranges beyond the capacity of the average retailer's capital investment. Third, where purchases are occasionally quite large but usually in retail quantities.

With reference to the first classification, as I have just intimated, most jobbers gladly concede this business to the dealer, and the jobber competition encountered by the retailer comes either from that small class of concerns who do not seek contractor business and who are really retailers themselves, though passing more or less successfully as jobbers; or else from the bona fide jobber who, small in number as in calibre, willfully ignores his obligation to his customers and to the industry. I have a remedy to propose, later, for this type of individual.

As to the second class, the committee virtually recognizes the propriety of direct contact between buyer and jobber. The majority of contractors frankly do not seek this business. Few retailers care to bid on cables, conduits and fittings, control apparatus, or even industrial reflectors, running into the thousands of dollars; and even if secured, the business could not possibly yield a profit commensurable with a retailer's overhead. It might be argued that if manufacturers and jobbers would keep off, the retailer could get the business at a proper price, but aside from the average dealer's lack of sufficient capital to handle transactions of this magnitude, concerted agreement on the part of manufacturers and jobbers would be impossible while the Sherman Law remains operative; and in the absence of such agreement, educational and persuasive efforts are clearly impractical when we consider the large number of concerns to be influenced.

It is with reference to the third class of industrial buyer that I personally have encountered the greatest embarrassment. An industrial reported to be in the market for a considerable quantity of electrical material immediately attracts general attention. Retailer and jobber submit prices and the jobber gets the business. For months thereafter the jobber continues to get the concern's orders, usually in constantly diminish-

ing amounts, until the business, at wholesale prices, becomes unprofitable and the customer a pest. Even if the jobber has the backbone to ask retail prices, he finds that he is not equipped to give retail service and that no price he could possibly charge for a couple of 60-amp. fuses will pay the expense of delivery, unless, like the retailer, he has a light truck maintained solely for the purpose of delivering to retail customers.

The problem is not simple. It is difficult for a jobber to refuse to quote on an industrial order of considerable size, even though he feels that after filling the initial order the customer will become a liability instead of an asset. It is equally difficult to advise retailers to solicit this character of one-time big buyer, particularly in view of the impossibility, usually, of telling in advance whether he is really going to be a one-timer or a repeater. Under the circumstances jobber and retailer will inevitably be thrown into competition, one with the other, and friction can be avoided only by the exercise of a broad spirit of tolerance by both. The difficulty of the situation, the impossibility of establishing rigid rules of conduct must be recognized; and a determination must be arrived at not to let this type of customer destroy the joint effort of wholesaler and retailer to create and maintain a satisfactory modus vivendi for those engaged in the industry.

"3—That wholesalers, receiving a maximum differential on all goods handled by them, such discount being designed to be divided between themselves and the retailer, are using that maximum discount to perform only a retail service on a part of their sales, thus setting up false standards for the basis on which actual retail business can be conducted at a profit."

The third postulate in the committee's specifications, to a jobber holding the pronounced views which I entertain and which I have on all available occasions proclaimed, presents no difficulties. It may be disposed of with the celerity and finality practiced by a police judge in Tennessee, whose court is a model of legal efficiency, and whose procedure is illustrated by the trial of a negro prisoner:

The Judge: What's your name?

The Defendant: Arabella Snow.

The Judge: Thirty days. Call the next case.

In such summary manner I am disposed to concede the committee's stand

on the question of the jobber engaged in the retail business. Particularly am I inclined to condemn the jobber who sells at retail while claiming to be a wholesaler exclusively. Thus it happens that friends of the jobber or of his employees buy much of their electrical appliances at wholesale prices; and these people often purchase on behalf of their own friends. In this manner, the retailer frequently loses the sale of a major appliance, after he has brought the customer to the buying point, by some zealous outsider with a friend in the jobbing house intervening and securing direct contact between jobber and consumer. In my own business we have been compelled to discontinue reciprocal trade relations with local jobbers in other lines because we found employees of such jobbers buying our goods for their friends and depriving our regular dealers of the business. A jobber who desires to sell at wholesale only is confronted every day with schemes for bypassing the retailer and must be constantly on guard against them. We have even known our legitimate dealers in other towns to furnish residents of our home town with written orders on us for the purchase of material, so as to save such persons the dealer's discount, and we have been able to combat this evil only by establishing a rule that we will not deliver electrical material in Memphis to anyone but an established dealer. If the out-of-town customer desires to favor us with an order, the goods must be shipped to him in his own town; he can then consult his own wishes about re-shipping them to his friends in Memphis.

I think there can be no question that the jobbers, as a class, disown retailing by jobbers, and that the practice is diminishing. I have talked with a number of those still engaged in retailing and almost without exception they declare their intention of withdrawing as soon as their present leases expire, or whenever a favorable opportunity to leave the retail district presents itself. There will always be a few engaged in retailing under exceptional circumstances, but ultimately little occasion will remain for complaint. By far the greatest annoyance will be caused by the retailer himself, who is emerging into the jobber class, and who has induced certain manufacturers to sell goods to him at wholesale, which he disposes of at retail; but of him, more anon.

"4—That many jobbers are extending lines of credit to contractors and dealers not commensurate with the responsibility of such customers, thereby encouraging speculation by inexperienced men and creating an unfair and an uneconomic competition that is demoralizing to the established and responsible business."

Item No. 4, charging that jobbers are taking undue credit risks has some foundation in fact, but not to an extent that imperils the jobbing or contracting industry. After twenty years in the jobbing business I count among my successful customers many whom, years ago, it was my privilege to assist financially in times of stress. The record of credit losses of our Memphis house over that period shows a range from a tenth to a half of one per cent, with an average of a quarter of one per cent. In other words, over a period of twenty years, for every hundred dollars worth of goods we have sold, we have collected ninety nine dollars and seventy-five cents. This record compares favorably with that of jobbers in other lines, and is, I think, representative of the average electrical supply jobber. I do not deny that there are those among us who are notoriously lax on credits, but the sin brings its own punishment, and you may feel safe in letting nature take its course.

I think the committee is wrong in its deduction that competition between jobbers induces the jobber to set up in business irresponsible and inexperienced men as contractors, in order to use them as a channel through which to sell their goods. I have heard of few cases where jobbers deliberately induced new and untried men to go into the electrical contracting business on the jobber's capital. What frequently happens is that a jobber securing little or no business in a given community will grasp the opportunity offered by the entrance of a new factor into the contracting situation, and will accord a line of credit in keeping with the judgment of his credit department. A credit risk of this character is not inconsistent with sound business practices. The usual occurrence, however, is that the new factor starts in with a knowledge of wiring and enough money to take up a C. O. D. shipment. If, in addition to these, he has reasonable business ability, his purchasing power in the course of months or years attracts attention from the jobbers; and his permanency in the field, with the acquisition of a stock of merchandise, establishes his

right to a reasonable amount of credit. I believe I may safely say that this is the beginning of the life history of nearly every contractor in the business. It is unfortunately true that in our industry we have an unusually large proportion of customers whose capital is not commensurate with their business opportunities. To a very large extent the jobber is compelled to supply this capital, and his success in business depends largely upon his discretion in meeting the demands made upon him. When application is first made, it is difficult to tell whether the applicant will prove a credit loss, or whether he will develop into one of those contractors whom every jobber must have on his books if he, himself, is to succeed in business. A cautious and judicious extension of credit is the only answer to this problem; and equally unfortunate with the jobber who grants an overextension of credit is the jobber who is too slow to recognize merit in a rising and capable young contractor.

"5—That lack of definite sales policies on the part of the larger manufacturers and jobbers and their salesmen is responsible for a lack of confidence on the part of the contractors and retailers."

The charge of a lack of definite sales policies is a trifle vague. Possibly the trouble is not that definite policies are lacking; but that the policies of many manufacturers and jobbers as they now exist do not suit the contractors. If this version is correct, I am thoroughly in accord with your committee. On the other hand, however, the contractors themselves are to a degree responsible for this situation. I do not know just how largely you figure in the calculations and the necessities of the manufacturers; but to the average jobber you are as vital as the air he breathes. Without your support and patronage, few jobbers can remain in business. Why you do not recognize and take advantage of this fact is one of the world's great, unsolved riddles. And yet, every day, you give your encouragement and business to jobbers who have no policy, or, if they have one, give you and your prosperity no place in its provisions. The majority of you seem to have an idea that the contracting industry will take care of itself and that you, therefore, have no individual responsibility in the matter; or else that the case is hopelessly without remedy and it is not worth while to try. You go on, day after day, year after year, buying on the

basis of price alone, giving no thought to the question of whether you are building up a friend or an enemy; thinking only of today's dime rather than tomorrow's dollar.

In complaints 1 and 2 you denounce the jobber who sells your customers. Did you ever refrain from patronizing such jobbers if their prices were lower than those of the fellow who is playing your game? Have you any idea as to what constitutes the mailing list of the so-called cash or mail order houses? Yet, I dare say, there are more than one of you who send them your orders in the same mail that carries the orders of your own legitimate customers.

You have a tremendous influence if you would only use it. The word "Boycott" is a harsh term and I hesitate to employ it; yet it is the only argument some of the jobbers will understand. Patronize the jobber who protects your interest; refrain from patronizing the jobber who refuses. I am speaking to you individually, not collectively. What is everyone's business is no one's business, and eventually is not accomplished. Apply the remedy yourself; don't expect the others to do it if you don't do it yourself.

This is one of the jobs that your organization, as an organization, cannot accomplish; but if you will leave this meeting determined individually to support only the jobbers who have what you consider a correct policy, and determined to influence your stay-at-home competitors to do likewise, your committee will soon be able to report that on this count, at least, the indictment is dismissed. And before we leave the policy question, let me present another phase of it. Has this association itself a policy? I do not mean for the jobber, but for your members. Your policy for the jobber is that he shall make his living out of you and not directly out of your customers. He must burn his ships and depend entirely on you. Have your members a policy that makes such a course safe for him? In my own part of the country, I'll say "Yes." In the land of the electrical giants, I am afraid not. My own policy approximates, I believe, what the committee had in mind when it presented its report and, if I were statistically inclined, I should say about

75 per cent of the trade appreciate and reward me for it. The other 25 per cent are indifferent. As it happens, I have few of the so-called national contractors in my territory. My argument, therefore, is not for myself but for my fellow jobbers in the metropolitan centers where the giants have their being. Does the policy of the giants make it safe for these jobbers to burn their ships? If what the metropolitan jobbers say is true, the answer is "No." Unfortunately for the Committee's report, it is undeniably true that some of your most important and influential members are in this class. In fact, a very large part of the genius and intellect of your organization is concentrated in them. I

the former a wholesaler and the later a retailer, claiming that the large contractor purchases and installs his materials in wholesale quantities. The absurdity of the argument is apparent when it is remembered that one of the fundamental requirements of the committee's report, of your own Association's platform, and of the book's own author is that a jobber shall not be also a contractor. The only sensible deduction is that if a large contractor looks upon himself as a wholesaler he should immediately cease contracting. It seems to me that his whole position is illogical, untenable and impossible, that he is a wholesaler for buying purposes only; and that no one would show resentment more quickly than he if some jobber took him at his word, considered him as really a wholesaler, and thereupon exercised the jobber's privilege of going into immediate and active competition with him.

Just one final word before I leave this subject. I imagine none of you will deny that if one and two make three, two and one also make three. If oxygen and hydrogen make water, so do hydrogen and oxygen. The same elements combine to make the same thing, regardless of which is mentioned first. A jobber who is also a contractor constitutes a thing abhorrent to this Association. By all the rules of reason should not a contractor who poses as a jobber also be stamped with like odium? Certainly the purposes of the committee's report will never be attained until this fact is recognized and properly acted upon by yourselves as well as the

Why should not the contractor-dealer share in all this [prosperity from better discounts]? There is no reason save his own indifference, his own supineness and his own lack of unified effort.

I congratulate your Association upon your committee's report. It is the first militant act I have ever seen upon your part to obtain what is your due.

If through an intelligent and vigorous following up of the committee's report, you can secure for yourselves the advantages gained by these larger interests, you need not fear their [non-electric stores] competition. Indeed, their presence in the field will make it easier for you to gain the compensation necessary to your successful operations, and easier for the manufacturer, through increased production, to grant it. But the prime requisite to all this is loyalty to your organization and an unceasing effort to increase its membership until it becomes really representative of your section of the industry.

The majority of jobbers, I am sure, are glad to see you at last taking this militant step to further your interests. Many of them have been fighting your battles, but without your aggressive help could accomplish but little.

—W. R. HERSTEIN.

confess frankly that I do not see how your Association is to continue and thrive without their support. If it is true therefore that a lack of understanding and an absence of reciprocity exist between the leaders of our respective branches of the industry, the committee's further work might well be directed toward this condition, with the certainty that the results of its efforts will be felt throughout the country.

The only attempt I have ever seen at a logical justification of this situation is in a little book published by a contractor on the "Ethics of Contracting." He sets up a distinction between the large and the small contractor, terming

the jobbers. In this connection and before passing on to the remaining problems of the contractor-dealer, I should like to present for your consideration a problem which confronts every jobber and causes him perpetual embarrassment. This is the case of the successful contractor, who discounts his bills, whose business is eagerly sought, and whose purchasing power and local influence are considerable. If there is a tendency on the part of the jobber to go over the head of the retailer in his selling efforts, the tendency of the successful contractor to seek direct contact with the manufacturers is immeasurably more pronounced. This matter has not received

the publicity it deserves because the number of dealers indulging in this practice is comparatively small, yet sufficiently important to cause serious embarrassment to jobbers who are making an honest effort to sell to the dealer and not to the dealer's customer. Section 3 of the committee's report denounces the jobber who sells at retail. Section 4 discountenances the taking of undue credit risks. There is no question that these two evils receive great encouragement from the well-to-do contractor who consistently endeavors to deprive the jobber of his only means of existence, and compels him to solicit directly the business of the contractor's customers and of the contractor's less reputable competitors.

"6—That the margins of discounts to retailers on many lines of goods, especially appliances, are insufficient to cover the cost of adequately serving their communities and leave a fair compensation; and

"7—That such insufficient margins of discounts to retailers on many lines are encouraging those who can do so to seek wholesale discounts on various pretexts, thereby still further upsetting the balance of distribution through an unequal compensation."

The sixth and seventh problems considered by the committee are grouped together, and properly so, since they are so related that one follows as a natural consequence of the other. Since, as a jobber, I freely concede the fact that dealers are inadequately compensated for the sale of shelf, counter and other retail appliances, it would seem that argument on this question should be addressed to an association of manufacturers rather than to a group of electragists. But did you ever consider the fact that you have never had an opportunity of addressing the manufacturers? Your own meetings are open to the world; so are those of the central stations and the jobbers. The manufacturers alone continue to work out their problems without the collaboration of the other branches of the industry, and their ideas on adequate compensation to their distributors and retailers are necessarily one-sided. It is to be regretted that the manufacturers have not been as open concerning their affairs as have the dealers and jobbers. Your Association's published study on the "Cost of Doing Business Among Contractor-Dealers" places valuable information in the hands of the industry. The Electrical Supply Jobbers' Asso-

ciation in the admirable report compiled by the sub-committee of its Committee on Accounting and Statistics, presented to the industry a study extending over a period of eighteen months, containing an exposition of the jobber's cost of handling forty-five major lines, the accuracy of which was vouched for by one of the most prominent firms of public accountants in the country. No one save the manufacturer, however, knows how the compensation he reserves for himself compares with that he accords those who serve him. Whether this be adequate, great or little, we can only vaguely conjecture. If the manufacturer would take the dealer more into his confidence and counsels, great good could be accomplished. If it appeared that the manufacturer's compensation was already small, the advisability of increasing both his and the dealer's profits by an increase in list could be discussed, since doubtless many meritorious devices are moving sluggishly not because their price is high but because it does not pay the dealer to push them. The more a dealer is paid, the more eagerly he performs his work. He will unquestionably do a better job selling a five-dollar article at two dollars profit than selling the same article at four dollars with a one dollar profit. Give him a chance and then condemn him if he does not perform properly; but don't condemn him without giving him a chance.

It is unfortunately true, as the committee has ably pointed out, that discounts to retailers of electrical merchandise are not such as to attract the capital and ability which the industry needs. Ultimately this fact will be recognized and remedied. But will the present type of contractor-dealer survive to enjoy this benefit? Already those of us who prefer to confine our efforts to electrical channels are beginning to note a perceptible decrease in the number of responsible contractor-dealers, and a deplorable diminution in the total volume of contractor-dealer business. In the section with which I am most familiar the effort to maintain neat and attractive electrical stores is visibly lessening. Competition from non-electrical sources is gaining headway, fostered largely by manufacturers and jobbers who have lost faith in the ability of the electrical man to properly represent them before the public.

We, ourselves, as distributors, are having great difficulty in securing sufficient volume on certain merchandising

lines to satisfy our manufacturers, and already we are receiving notices that unless we increase our purchases these manufacturers will either cancel our agencies or appoint additional distributors in our territory. On the very day these words are written, we have received a letter from one such manufacturer withdrawing his discounts to us, on the grounds of insufficient volume. Many jobbers, like ourselves, are now confronted with the necessity of choosing whether we will stick to our old policy of selling to electrical dealers only and thereby confining our business to housewiring material or of abandoning this policy and in order to obtain the benefits of the opportunities offered by appliances and radio, seeking outlets among the newcomers in the field.

Hope Lies in Better Discounts

The picture looks dark, but it is not without hope. The two plans suggested by the committee, namely, consignment and deferred compensation, appear to me to be too complicated; too inviting to those without capital; and too dependent upon the agreement of thousands of different interests to be practical, even if not clearly in violation of the laws of the land. The hope of the future, I believe, consists largely, possibly entirely, in the granting of better discounts to retailers. Already this remedy is under way. Ten years ago, discounts of 25 per cent were high. Five years ago, 30 per cent and better were common. Today 35 per cent and 40 per cent are not unusual. In my opinion, nothing less than 40 per cent will save the dealer. Experience has shown that the modern type of retail store, with neat and intelligent salespeople, cannot be maintained for less. The manufacturers are recognizing this by according department stores and merchandising departments of central stations preferential or syndicate discounts ranging from forty to fifty per cent. The manufacturers are not stupid and they know that if these large interests need such discounts, even more does the small dealer require them. But these discounts have not been eagerly granted. They have been obtained by a show of strength and unity of effort on the part of the organizations of which these interests are members. Nor have the manufacturers lost by providing adequate compensation for these large outlets. Increased sales, increased output, mean decreased manufacturing costs; more

(Continued on Page 41)

Better Business Building Through Proper Accounting*

By F. W. GREUSEL

G.-Q. Electric Company, Milwaukee, Wisconsin

IN approaching this subject it is possible to give consideration to all of the angles which might be captioned as follows: Necessity, method, application, reception and results.

On the subject of necessity.—I do not think the condition of the electrical contractor-dealer was any worse in Milwaukee than elsewhere in the country and for years we and other jobbers comforted ourselves with the thought that our credit losses from this source were no heavier than in other sections.

A few losses in 1920, together with the depression of 1921, proved conclusively the necessity for some method of improving the present contractor, rather than allowing him to fail and be replaced with one lacking experience.

Realizing that many problems were involved in this complicated situation, we turned to your own Association for relief through the medium of the Standard Cost Accounting System.

Careful investigation of this system led us to believe that its proper application would be the salvation of the contractor and the problem then confronting us was how to accomplish the purpose. We knew of isolated installations of the Standard Accounting System, which were later discontinued because they were not started off right, as in most cases an ordinary auditor or accountant will offer suggestions that eventually change the system to such an extent that it does not serve the purpose intended. We felt that the activity should be one in which the entire industry in Milwaukee should participate, both for the purpose of creating additional interest as well as dividing the expense. Therefore, in August of last year, joint meetings were held, at which time local jobbers and fixture manufacturers met with a committee from the Electrical Contractor-Dealers' Association and a plan was worked out whereby the services of a competent accountant was secured who was to devote his entire time to the installation and upkeep of accounting systems for those con-



F. W. Greusel

tractors needing same. A joint fund was created by the co-operative group to underwrite and guarantee to the auditor that a certain minimum compensation would be granted, although each accounting system installed was to be paid for by the contractor benefited. It may prove of interest to you at this time to learn that the guarantee fund remains practically intact and that the accountant has been busy constantly.

The joint committee started out at once to give publicity to the movement and various methods were employed both collectively and by individual firms who were contributing to the fund; results were obtained and many interested contractors soon placed orders with the accountant, through the Contractor-Dealers' Association, for Standard Accounting Systems. However, the one outstanding feature of the publicity campaign was the support given the movement by those successful contractors who already had satisfac-

tory accounting systems, but who realized that bringing competitors up to a higher standard would prove beneficial to all and place the entire industry on a higher plane by establishing competitors who knew their cost of doing business and who no longer groped in the dark. Personal visits were made by representatives of the jobbers, as well as the contractors group, to those who evidenced an interest, but who were skeptical as to the operation of the system and these visits resulted in closing numerous prospects.

Shortly after the first of the year it was found that a substantial percentage of contractors had installed the Standard Accounting System—more in actual numbers, I believe, than are installed in any other city.

If I were not limited in the time allotted me I would be able to recite instances where the benefits derived by contractors seem almost unbelievable—instances of where discouraged contractors who had been in business several years, without profit, were operating on a profitable basis within a period of sixty days after installation—instances of where a smaller volume of business, taken at the right price, resulted in greater net profits than previously were enjoyed.

In summing up the results of our efforts over the past thirteen months we all feel that much has been accomplished that has benefited the entire industry, even beyond the environs of Milwaukee. We are continuing our monthly joint conferences, devoted entirely to this problem, and new ways and means are always under discussion to keep alive the interest manifested at present.

Speaking for our company, I can state that during 1924, unless some adverse condition develops which at the present time is not apparent, our credit losses in Milwaukee from contractor-dealers will be practically nothing and we have enjoyed during the present year a greater increase in volume from the contractor-dealer than from any other class of trade.

*Abstracted from address presented at 24th Annual Convention, A. E. I., West Baden, Ind.

MANUFACTURERS EXHIBIT

List of Exhibitors

- A—A Wire Co.
- Frank Adam Electric Co.
- American Wiremold Co.
- F. A. D. Andrea, Inc.
- Appleton Electric Co.
- Benjamin Electric Mfg. Co.
- Bryant Electric Co.
- Bussman Mfg. Co.
- Central Electric Co.
- Central Tube Co.
- Chicago Fuse Mfg. Co.
- Commercial Investment Trust, Inc.
- Conlon Corporation
- Crouse-Hinds Co.
- Curtis Lighting, Inc.
- Eastern Tube & Tool Co., Inc.
- Economy Fuse & Mfg. Co.
- Edison Electric Appliance Co.
- Edison Lamps Works of G. E. Co.
- Electric Porcelain Mfrs.
- Electrical Record
- I. P. Frink, Inc.
- General Electric Co.

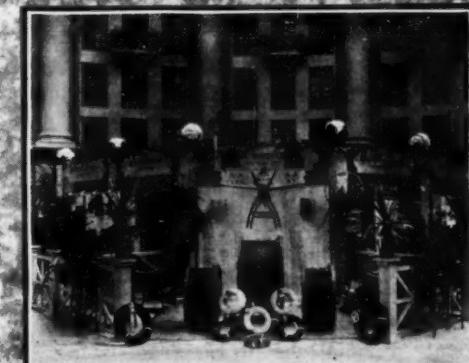
**24th ANNUAL
A. E. I. CONVENTION**



MANUFACTURERS' EXHIBIT

List of Exhibitors

J. S. Jacobson Co.
Lighting Educational
Committee
Marion Insulated Wire &
Rubber Co.
H. P. Martin & Sons
Mutual Electric Machine Co.
National Lamp Works
Westinghouse Lamp Co.
National Metal Molding Co.
Radio Corporation of America
Reflector & Illuminating Co.
Geo. G. Roper Corporation
Society for Electrical
Development
Square D Company
Tork Company
Triangle Conduit Co.
Trumbull Electric Mfg. Co.
Wadsworth Electric Mfg.
Co., Inc.
Albert Wahle Co.
Western Electric Co.
Westinghouse Electric &
Mfg. Co.
Wheeler-Green Electric Co.



WEST BADEN, INDIANA 1924

Abstracts of Reports and Addresses

Report of Laurence W. Davis, Secretary-Treasurer

THE Association has made marked advances in the last six months since the meeting of the Executive Committee in March. The total membership at that time was 1,602, whereas today it is 2,006, a net increase of 404 members. The states of California, Texas, Iowa, Alabama, Ohio and Michigan show large increases in membership with California leading with an increase of 238 members.

The California Association have affiliated 100 percent with the International Association, have changed their name to the California Electragists, have adopted the trademark ELECTRAGIST as their emblem and are working to develop 100 percent local associations of electragists as rapidly as possible.

I believe that this movement is an important one in the right direction and I hope we are rapidly reaching the time when we shall have affiliated Associations of Electragists in every state licensed to use the name ELECTRAGIST in their title under our guidance and with watchfulness of their efficient operation as associations. We must help our state associations of Electragists to plan their budgets wisely and economically, suggest effective work that they can carry out and assist them in building strong organizations.

An outstanding development of the past six months in the Association is the formation of an active Technical Department under the direction of Arthur L. Abbott. We are working to make this department constantly more useful to our members in preparing valuable technical data and practical helps.

The cash statement of operations of the Association for the first eight months of this year shows a direct income of \$44,029 to September 1st, an increase of \$5,290 over last year; and disbursements of \$41,535, or \$2,696 less than in the same months last year.

An interesting figure in the cash



L. W. Davis

statement is an item of \$229 for returned dues and fees as compared with \$10 for last year. We are watching the character of applicants for membership very carefully and trying to admit only such as will make real electragists in the fullest sense of the word.

Report of Technical Director, Arthur L. Abbott

TIEING in with the stand taken by the Association of Electragists—International, favoring an all-metal standard, a preliminary report has been prepared on armored cable wiring. This report includes estimating data and a brief discussion of installation methods. A Job Sheet for keeping cost records of small jobs was brought out August 1, of which 25,000 copies have been distributed to date. Supplementing the Standard Accounting System, a Labor Summary Sheet and a Job Control Sheet are being added to our stock of standard forms. The latter will be a monthly recapitulation of all jobs in progress or completed during the month, showing for each job the estimated cost, cost for the month, and total cost to date, all costs being subdivided into labor, material, job expense, and overhead, and showing net profit or loss on all completed work.

Much engineering data is being added to the Data Book, classified under twelve heads for which distinctive index tabs will be furnished. Work is in progress on a set of tables of wire and fuse sizes for motors, and new and up-to-date sheets covering illumination, voltage drop calculations, wire tables, electrical and mechanical units and conversion factor.

Through contact with members in various cities who have agreed to cooperate, the scope of the Manual of Estimating is being extended and its usefulness thereby increased.

Many requests are being received from members for technical information. We welcome these inquiries and hope that more of our members will

take advantage of this phase of our technical service.

Report of L. G. Ross, Chairman, Standardization Committee

SINCE the last meeting of the Executive Committee the Standardization Committee has been gathering data principally along two lines. First, the elimination of the use of black conduit and fittings; second, towards the standardization of knock-outs and outlet boxes. Questionnaires were sent out to the membership which included four questions on knock-outs and outlet boxes, and three pertaining to conduit and fittings. A total of 326 questionnaires were returned, showing the following results:

To the first question, "Should knock-outs in back of outlet boxes be of the same size as those in the slides?" 199 answered "Yes" and 63 "No." The second question, "Should all knock-outs in the back of box be $\frac{1}{2}$ inch regardless of the size of the side knock-outs?" 124 answered "Yes" and 128 answered "No." The third question, "Should the center knock-out in back of box always be $\frac{1}{2}$ inch and the others the same size as knock-outs in the sides?" 193 answered "Yes" and 51 answered "No." The fourth question was, "If not one of the above combinations what do you consider the best or most practical?" Sixty-eight members answered this question with different combinations, the great majority of them asking for a box with half the knock-outs $\frac{1}{2}$ inch the other half $\frac{3}{4}$ inch. The present boxes having knock-outs larger than $\frac{3}{4}$ inch seem to be satisfactory.

As to the matter of eliminating the use of black conduit and fittings, there seems to be but little question in the minds of the Committee. In the recapitulation of the answers in the questionnaire we find first that these questions were answered on every questionnaire. Only 26 members thought there was any reason for the use of black conduit in preference to white other than price,



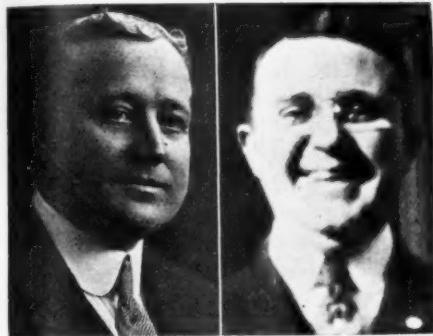
L. G. Ross



A. L. Abbott

while 198 claim that there is no reason. We find that 194 members carry both black and white in stock while 132 carry white only. But 10 members prefer to use black pipe while 315 prefer white only.

Another matter of interest to that part of the membership using wiring devices is the fact that several makes of tumbler switches which have but recently come on the market will not take a standard plate. This matter is being taken up and it is hoped to standardize these switches very shortly.



J. F. Buchanan

J. G. Crosby

Labor Sections

MEETINGS of both the Open Shop Section and the Union Shop Section were held on the evening of September 30. At the meeting of the Open Shop Section, the chairman, Joseph G. Crosby, of Philadelphia, discussed the report which he had submitted to the Executive Committee and consulted with those in attendance as to the course which the section should pursue during the coming year. It was decided that the section could be of greatest use to its members through the collection of data on open shop conditions throughout the country. Mr. Crosby asked that he be relieved of the chairmanship and J. F. Buchanan, Philadelphia, was elected in his stead. S. J. Stewart was elected secretary. An increase in membership was voted desirable and the officers were instructed to use their best efforts to accomplish this. A discussion on the amount of annual dues followed and it was decided that for the present they would remain at \$5 per year.

Officers for the coming year were elected by the Union Shop Section as follows: Chairman, L. K. Comstock, New York City; vice chairman, J. A. Kelly, Denver; directors, Robley S. Stearnes, C. G. Chaplin, W. Creighton Peet, A. J. Hixon, J. H. Busby, M. H. Johnson, Sidney Blumenthal, Howard P. Foley.

"Monopolistic Tendency of State Insurance"

Address of Lynton T. Block

THIS title expresses a feeling of apprehension in the minds of many business men throughout the country. In every legislative year there is presented to the legislators of many states one or more bills looking toward Monopolistic State Insurance and those employers who are opposed to this form of monopoly have been required to spend time and money in order to preserve to themselves some measure of competitive influence in the procurement of the insurance which the law requires.

I take it as a concensus of opinion that Workmen's Compensation as an institution is desirable. Workmen's Compensation goes upon the theory that an injured employee is entitled to certain benefits and substitutes fixed benefits for the old common law rights of action.

On the side of the advantages of State Monopolistic Insurance, I can think of none favorably affecting the employer unless it might be the hope of a reduction in the cost of furnishing the insurance, and I can think of none favorably affecting the employee unless it may be more prompt and liberal treatment of claims. Experience has not shown that the cost of insurance in states having Monopolistic State Funds is on the whole any lower than the cost of similar insurance in competitive State Fund states and experience also seems to indicate that the administration of State Funds involves much red tape and great delay in the payment of claims to injured employees.

There are, broadly speaking, three methods of insurance available under the competitive system for Workmen's Compensation: First, the regularly constituted Stock Insurance Company with an invested capital and conducted for profit; Second, there is the general grouping of Mutuals and Reciprocals, conducted not for profit, but for the benefit of those individuals, firms and corporations who band themselves together to obtain their protection, and third, there is the State Fund, if one is in existence.

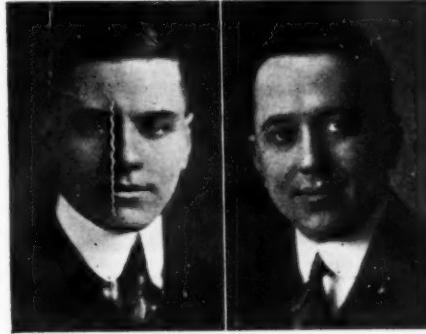
In a system of free competition between these three methods, who can complain?

Competition keeps us on our toes. Without competition, lethargy results.

What is the remedy for this agitation for Monopolistic State Insurance? I believe there are just two avenues open. One is by education of the people with respect to the facts I have mentioned and the other is encouragement of those kinds of insurance, which give the citizen relief in the form of reduced cost of insurance. This involves the encouragement of all forms of Mutual and Reciprocal Insurance.



L. T. Block



P. B. Zimmerman K. E. MacIntyre

Home Lighting Contest

THE progress of the Home Lighting Contest was reported on at the business session on October 3 by P. B. Zimmerman, vice chairman, Lighting Educational Committee, and Kenneth MacIntyre, representative of the Society for Electrical Development. According to the report 3,681 communities are holding such contests. This figure includes the majority of the communities over 1,000 who have an electric service and a number under that population. Nearly two million Home Lighting Primers have been distributed to these communities. When plans for the campaign were formulated, it was estimated that a maximum of 1,500 communities would participate. The figure just quoted is over double that amount. A million primers was the highest expectation of the Committee and this too, has been doubled.

One thousand cardboard model cutouts were ordered and so far over 5,000 are in use. This means that 5,000 stores are displaying literature in their windows. Five hundred medals for prizes were purchased originally. Over 2,000 will be used. About 200 sets of slides and charts are now in use. This means that thousands of lectures are be-

ing given to clubs and business organizations. In addition, the committee film is being shown throughout the country.

There is no doubt but that nearly every school child in the United States and Canada eligible for the contest, is fully aware of the movement. Three million children have been personally handed announcement folders and registration cards.

Regulatory Legislation and Uniform Ordinance

Address of R. W. E. Moore

THE need of the industry for a uniform inspection ordinance in all cities where an ordinance is in effect or is proposed was presented to the convention at its first session by R. W. E. Moore, Casualty and Fire Prevention Committee, Electrical Manufacturers' Council. Mr. Moore brought forward for the consideration of the members of the A. E. I., a model ordinance which had been prepared by the Electrical Manufacturers' Council.

In his talk he cited the difficulties manufacturers and also those contractors who do work in varying localities experience from conflicting rules and regulations in different cities. Many cities which have inspection ordinances have written into them the National Electrical Code but, as Mr. Moore pointed out, any revision of the Code makes these ordinances obsolete.

Preparation of a uniform ordinance, he said, seemed to the Electrical Manufacturers' Council the best way to answer this problem, provided the ordinance recognize the National Electrical Code and remain up-to-date without revision from year to year no matter how often the Code itself was revised. The ordinance drawn up by the manufacturers has no rules written into it at all but has one section that provides that all installations be in conformity with the most approved methods and that the National Electrical Code shall be accepted as the most approved method.

Since there is a great tendency, now, to enact ordinances or revise them, establishing State Commissions, and enacting statutes for the safety of life and property in electrical installations, Mr. Moore said in presenting the model or-

dinance, it is to the interest of the electrical industry, not to try to obstruct or stop the movement, but to guide it.

The discussion after Mr. Moore's address showed that the convention was in favor of a uniform ordinance and it was recommended by the delegates that the Executive Committee confer with representatives of the Electrical Manufacturers' Council in order to revise the proposed model ordinance to better meet the needs of both manufacturers and contractors.

Evening Classes

THE innovation of conducting evening classes on subjects of specific interest to contractor-dealers met with signal success. Attendance at the classes, which developed actually into round-table discussions of the topics, was large and though the meetings had been scheduled to last only an hour, in each case the discussion continued long past the time set.

The first class was held on Tuesday evening, the subject being "Financing, Credits and Collecting." It was conducted by R. J. Greil, of the Commercial Investment Trust, Inc., New York City, who explained the time payment plan for house wiring which the investment company had worked out with the assistance of the staff of the Association. Its advantages, he said, consisted of enabling the contractor to handle a large volume of business without tying up too much capital.

On the following night the class was devoted to "Buying, Stocking and Selling," and was conducted by M. C. Turpin and J. A. Clark, of the Westinghouse Electric & Manufacturing Company. Mr. Turpin said that, far from the impression

current in some quarters, it was not the policy of the farsighted manufacturers to overload the dealer. However, it was reasonable for the manufacturer to ex-

pect his dealer to take adequate care of what should be the normal demand for electrical merchandise in his territory. He pointed out to the fact that every home is a potential market for \$560 worth of electrical merchandise whereas the average per home is only around \$80. Mr. Clark's paper is presented elsewhere in this issue.

Owing to the early adjournment of the convention the class on "Code Problems of the Contractor," conducted by A. Penn Denton, was advanced to Friday afternoon. This was one of the most enthusiastic meetings held during the convention and Mr. Denton will report on the developments later.

The Red Seal Plan

Address of William L. Goodwin

ONE of the most interesting features of the opening session was the presentation by W. L. Goodwin of the Red Seal Plan which is part of the activities of the Society for Electrical Development.



W. L. Goodwin

The Red Seal is the symbol of adequacy which, according to Mr. Goodwin, refers to the number of convenience outlets, switches, wall brackets, ceiling outlets, circuits and sizes of feeders.

The idea is built around a ten-pointed red seal which is placed on houses that measure up to the predetermined standard. Because of differing degrees of local electrical progress each locality may set its own standard. It is essential, however, that the National Electrical Code be recognized and used in every locality before permission to use the plan may be secured.

The seal is copyrighted and license to use may be secured by local electrical leagues under what is known as a Form A License. Contractors may secure Form B licenses.

Red Seal specifications run for one year only in order that there may be a progressive development of standards.

The plan is offered as one way in which the contractor may sell quality jobs without fear of cheap competition. Any one can install a Red Seal job, but the job must measure up before it will be certified.



M. C. Turpin

Managing the Motor Repair Shop*

By GEORGE P. SVENDSON

Boustead Electric and Manufacturing Company, Inc., Minneapolis, Minn.



George P. Svendson

IN LATE years the use of electrical power equipment has grown by leaps and bounds and the old type of motor repair shop has found itself unable to take care of the increased business. This has resulted in a great many establishments devoting a substantial part of their efforts to such work.

By its very nature the volume of motor repair business is a very uncertain quantity and the first big problem of management is to decide how to take care of these ups and downs of volume. They are not seasonable to any great extent, nor can they be based on past performance since they originate in accident, misfortune and carelessness, which have no rule or law to govern except the law of averages. This law of averages will only help when the territory served is increased and this points to one way of carrying on an exclusive motor repair shop business, namely, to go after it in a big way and cover a large territory geographically. In the past this was feasible, but the rapid growth of electrical power applications, previously mentioned, has brought the local shop to the front.

*Address presented at 24th Annual Convention, A. E. I., West Baden, Ind.

Prompt and efficient service is the foundation of a successful repair shop and with a widely fluctuating volume of business such service cannot be maintained without a working force and equipment based on practically the peak load.

If conditions are right a wide territory and the law of averages will solve this problem by smoothing out the peaks, but such ideal conditions are rare and we must look for some other means to give the prompt service demanded. It is nothing unusual to have a quiet shop with about 10 per cent. of the force on active repair work change over night to a crowded condition with everyone working at top capacity and putting in extra hours.

Business for a Specialist

At first thought it would seem that an ideal combination would be to operate the motor repair shop in connection with the regular electric contracting business. A careful analysis of such a combination shows it to be a poor one at its best.

In the first place the men required for the two classes of work need entirely different training. Your shop mechanic usually makes a poor wireman and the average journeyman is lost on the simplest rewinding job. Therefore any attempt to interchange the men is bound to result in inefficiency and high costs unless one has the rare luck to get a group of men equally well versed in both lines. There is also the possibility of peak demand in both departments at once.

Training Required

In the office likewise the training required is different. The repair shop man must be trained along more strictly engineering lines and be well up on electrical and machine design as well as shop production methods.

One of the best solutions of this variable volume problem is to take up the rebuilding of used apparatus. In this way an organization can be maintained to give peak repair service at all times and when the repair work drops off this same shop crew and equipment can be used for overhauling and rewinding used machines. Likewise in the office

the switch can be made smoothly and efficiently. There is engineering work in remodeling or changing the design of old machines; there are stock lists and advertising to be looked after and the selling and rental of this equipment is highly profitable.

Let us briefly consider some of the more important points of general business principles as they apply to this.

One of the most important of these is accounting. To run a motor repair shop without an adequate accounting system is simply courting disaster and a system along the lines of the Standard Accounting System should be installed by all means. In small shops this can be almost used as it is, but in larger shops there will probably be more subdivision of accounts. The "Cost of Sales" scheme should be carried out with its perpetual inventory feature, as this makes possible a monthly financial statement based on facts that is invaluable in securing loans from your banker for discounting bills or for swinging some large job or some special bargain in used apparatus.

Accounting System Invaluable

Above all things use the accounting system after it is installed. There is nothing like making monthly and yearly comparisons of sales and gross and net profits as well as departmental comparisons. It shows the leaks and indicates where and when to put on special effort.

Many interesting and sometimes startling facts can be discovered by comparing various monthly or yearly totals. For example, shop overhead compared to total productive man hours. General office overhead compared to number of sale tickets put through. Store room expense compared to number of items handled, etc.

In the repair business practically all the work is done on a time and material basis so it is absolutely essential that overhead be properly charged to each job and a good accounting system is the first step to secure this result. In an article previously published in The Electragist the writer discussed some of the problems of distributing overhead.

One important point often overlooked by repair shop men is the proper basis

of figuring allowances on old apparatus when taken in trade for new or rebuilt machines. Quite frequently the allowance is practically as much as the sale price of the machine when it is again resold. This means *two sales with one profit* and a corresponding decrease in turnover. It was just such an error that proved the undoing of so many automobile dealers throughout the country. The allowance should be such that when the rebuilt machine is sold it will carry a suitable profit.

If an accurate account is to be kept of the profit on rebuilt machines it is essential that some system be installed to keep tab on the value of such stock. One of the best schemes is to use an individual stock card for each machine, giving its complete technical description and its trade-in or cash purchase value. In addition the cost of rebuilding should be shown. In this way an exact inventory record is always available and the cost value of the rebuilt apparatus can be accurately determined.

Odd-Hour Work

Where used machines are rebuilt by a repair crew in odd hours between jobs it is advisable to carry the cost of rebuilding into the inventory *without overhead added*. Experience will usually show that rebuilding in this manner will cost appreciably more than where the work can be put through on a steady productive basis. The total overhead can be charged to the repair work which is proper as without the rebuilding work the overhead would not only be as much but actually more by the amount of idle time between jobs. Of course where the rebuilding is the main issue and repairs are incidental the above would not apply.

Another important feature of the motor repair shop is the maintenance of proper stocks of material and finished merchandise. We find very few jobbers that carry any stock of material such as required by the repair shop. This means that the repair man must maintain his own stocks and as the service he renders depends vitally on this stock it is very important that it is kept up. One of the best methods of doing this is using a perpetual card inventory.

A Successful Stock System

Now here is the secret of the success of a stock card system for a small repair shop, especially where practically every job must be costed on account of time and material billing. First, put all material in a locked stock room with one boy or man in charge and respon-

sible. Material is only issued on requisition, using a small slip having place to check deduction from stock and charging to job. The stock card should also be a price card so in one operation the stock man deducts the quantity from stock and gets the cost price on the requisition slip. The slip next goes to the office to be filed in the job envelope or posted to the job ticket. The usual objection to the stock card is on the grounds of extra work and extra help, but if the old system is analyzed it will be seen that the same or more work is being performed and with less efficiency. In our old system the shop men laboriously recorded material that is now quickly and accurately done by the stockman. In the old way a clerk priced a mixed list in a slow and in efficient manner. Now the stockman gets the price instantly from a ready card and at the same time with little extra effort strikes a new balance. Instead of a large number of stock clerks, so to speak, each working a few minutes a day, we have only one who works efficiently. Where the stock man would not be kept busy all day with stock work he can fill in by cutting insulation, making brushes or doing other odd jobs. In a real small shop of two or three men one can devote part of his time to stock records.

Small Items

One other bugbear of the perpetual card system is the matter of small items of material with low value, such as soldering paste, solder, paint, glue, etc., doled out in almost immeasurable quantities. These can be handled very easily on a budget basis. They are issued to the shop in standard quantities and so taken care of on the cards, being charged to "Budget Material." The foreman then makes an estimate of budget material used on each job and charges it to the job in a lump sum.

Finally to get the stockman's time charged to the job add a charge to the material on a cost per item basis.

Such a card system is invaluable to the repair shop, as it prevents running out of important items, keeps stock investment to a minimum, boosts turnover, makes it possible to buy more intelligently and forms an up to the minute cost record of material used.

Service is a word that has been very much abused in business, but if there ever was a business where service was spelled in capitals and meant everything that has ever been connected with the word that business is the motor re-

pair business. When an important motor breaks down its owner wants it back in operation with the least possible delay. Alibis about lack of men or material do not interest him. If the machine is important enough he is willing to spend money for overtime work or for making up special parts that could be bought much cheaper from distant factories; in fact, everything that will save time is acceptable without a great deal of regard to cost. The shop that maintains the men and equipment and material stocks to take care of this class of customer promptly and efficiently does not have to worry about price cutting competition.

Real Service

This service must not only be top notch as to speed, but also as to quality of material and workmanship. The material should only be the best of its respective kind. It is poor economy to try and save a few pennies per yard or pound of material when such saving may cause a break down on a job where the labor and overhead involved is many times the total cost of material used.

Since repair work is an expensive proposition at its best in comparison with the original cost of apparatus, everything possible within reason should be done to reduce costs. The liberal use of labor-saving machinery is one of the best means to offset the high labor charge and at the same time make better service possible. Wherever possible the original factory methods should be duplicated. Of course the repair shop cannot duplicate the special tools and jigs used for factory mass production, but many quickly adjustable labor-saving devices can be installed and will pay big dividends on the investment. In addition to the equipment used for the actual work, there is the item of suitable forms to record the progress of the work through the shop.

Efficient Forms

There is no limit to the number of forms that can be evolved for any particular business so before adopting any new ones two simple questions should be asked: first, will there be any saving in time or effort in the execution of orders; second, will the new form make a worth while addition to the temporary or permanent records of the business? If a form does not save any time or effort or has no use as a record it has no place in a business.

Running the Big Job*

By O. F. WADLEIGH

Sanborn Electric Company, Indianapolis, Ind.

AS THE majority of our larger operations are not in our home city, but are at a distance of from fifty to five hundred miles or more, our methods of conducting our operations may be somewhat at a variance from those used by some of you present. As we do not operate through branch offices, but from the home office exclusively it is necessary that every minute detail be settled in advance insofar as possible, thus avoiding expensive delays on the job.

I have divided our problem into three general divisions, to wit: "Legal," "Technical" and "Financial" and I shall proceed to discuss the topic under these three headings.

Legal Aspects

As one of my associates has so truly pointed out, the first important thing to be done is to get the job. Therefore, I shall start with the assumption that the job has been "got" and I sincerely hope through the use of the Manual of Estimating which Mr. Abbot so earnestly and properly advocates.

The legal part of the operation will consist of the contract proper, the specifications, the filing of the various applications for inspection and the compliance with local ordinances as to licenses, permits, etc.

The clarity of the contract should be especially watched to see that the agreed price is correct, the terms of payment specified and strike clauses included. Completion dates should be noted with care. Waiver of lien rights are sometimes inserted. The point is to be sure the contract is fair and that you do not sign away your rights.

The specifications should be examined carefully to see if they are the same ones you had when you figured the job; that all the pages are present and that the "general conditions" are actually attached. You know that "general conditions" are sometimes just mentioned and they may contain some awkward clauses, that is, awkward if you sign up before you read them. It is not a bad idea to initial each page of the specifications. Any uncertain-



O. F. Wadleigh

ties such as the many "as directeds," "as the architect may select," etc., should be given careful consideration.

After the names are all on the dotted line comes the filing of the application for inspection. Some cities and states require a master electrician's license, or a professional engineer's license. All such ordinances and laws should be complied with as early as possible. This, in brief, covers the more important points from a legal standpoint.

Technical Aspects

The technical side of the operation consists of preparing the plans, provision of tools and equipment, provision of materials, organization of the working force and inspection by the contractor's engineer in charge of the operation. It has not taken much time or effort to say these last few words, but my, what a lot of hard work they represent.

Plans. We believe in and follow the practice of making our own plans, no matter how complete the plans furnished by the architect or engineer. Our reasons for following this practice, we be-

lieve, are sound and productive. In making these plans we become intimately acquainted with the job in all its details, not only from the electrical standpoint, but also from the structural standpoint. We learn more about the physical conditions to be encountered than we could possibly learn by inspection because we actually do the electrical work, through visualization, from start to finish. In this way we avoid many costly errors and delays. We are enabled to prepare plans using symbols and notes with which our men are familiar, thus tending to reduce labor costs.

Plans Are Mechanical.

In making these plans we strive to make them mechanical rather than diagrammatic, to amplify with notes, diagrams, dimensions and instructions, thus relieving the man on the job of the time consuming task of trying to figure out what to do and how to do it. In other words, we try to fix things so that all the man has to do is install the work with the least delay.

I could talk an hour on the subject of plans, but I believe I have sufficiently indicated our ideas and practice.

Tools. After the plans are under way the consideration of tools and material is the next step. There is not much I can say about tools that is of any interest except that we never seem to have any on hand no matter how many we buy. We have standardized on certain styles after much experience and discussion. About the only tools shipped from our toolroom are stocks and dies, vices, pipe benches, hickies and later cable pulling tackle. We try not to go wild buying fancy tools. Many fancy tools are all right, but usually the amount of work involved does not warrant the investment.

Material. We believe that, providing the man on the job has the proper material at the proper time and definite plans and instructions as to the use of the material, he cannot fail to install the work efficiently. Of course the personal equation will modify this statement, but I am assuming that the man has been carefully chosen. Therefore, in order that the man may not be di-

*Address presented at 24th Annual Convention, A. E. I., West Baden, Ind.

INVOICE OF MATERIAL

INVOICE OF MATERIAL													
RECEIVED AT _____	DATE _____												
FROM _____ <small>(NAME AND SHIPPER)</small>	TO _____ <small>(POINT SHIPPED FROM)</small>												
BY _____ <small>(HERE STATE WHAT R. R. OR WHAT EXPRESS)</small>	\$ _____ <small>(PMT. ON EXP. BILL)</small>												
FOR USE ON JOB NO. _____													
<p>Foreman will fill out one of these invoices of Material FOR EACH shipment received and pin to it the freight expense bill, sign his name and mail to office at once.</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="height: 40px;"></td></tr> </table> </td> <td style="width: 50%; vertical-align: top;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="height: 40px;"></td></tr> </table> </td> </tr> </table>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="height: 40px;"></td></tr> </table>						<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="height: 40px;"></td></tr> </table>					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="height: 40px;"></td></tr> </table>						<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="height: 40px;"></td></tr> </table>							
<p>THE SANBORN ELECTRIC CO. CONTRACTING ENGINEERS AND SUPPLY DEALERS ELECTRIC AND GAS CHANDELIER INDIANAPOLIS</p>													
FOREMAN _____													

Form 1 **FOREMAN'S REQUISITION**

The Sanborn Electric Co.,
Indianapolis

Please ship by Freight
 Express
 Parcel Post
 Motor Car

To _____
(Give complete shipping instructions)

Name of Job _____ Job No. _____

AMOUNT	CATALOG NO.	USE TRADE NAME OF ARTICLE <small>HAVE SENDER F.O.B. POINT</small>

(Foreman signs here)

Use this form for ordering material. Don't order in letters

Foreman's Special Forms For Material

verted from his main object, installation, we take the responsibility of providing the materials. We know we are in a better position to do this as our engineering department has made the estimate and has made the plans and, therefore, knows the quality and quantities to be used. The man on the job whose time should be fully occupied with his problem of installation cannot be expected to efficiently select and order material. If he does attempt this, he will play safe and usually over order, which results in loss.

In making up our estimates we carefully take off, list and total all the material, even to the minor pieces such as lock nuts, bushings and studs. Thus when we are awarded a contract, we have a material list already to use. Of course this is revised just as soon as

the final working plans are completed, but it is sufficient to place initial orders

The material of course is not all purchased immediately. We go over the building schedule carefully and decide on tentative dates for delivery. Conduit is ordered in carload lots, keeping in mind to get the various sizes on the site with some regard to the time they will be used. Outlet boxes, conduit fittings and all roughing material, switchboards, panels, cabinets, finishing material, etc., wire and cables, all are kept flowing to the job in proper sequence, quantities, quality and design to comply with the requirements. All of this is attended to at the home office. Schedules and instructions are furnished to the man in charge telling him what is being shipped and how it is to be used.

Take for example wire and cables. The length of feeders is predetermined and they are ordered shipped on marked reels. The marking of these reels is determined from a carefully prepared schedule, the result being that when cable pulling is commenced the man in charge knows on just what reels any particular feeder or section of feeder is to be found and does not have to measure, figure and scheme out how to use the cables he has on hand.

Naturally there is certain minor material or material due to unforeseen conditions which is requisitioned from us by the man in charge. Such material, however, is a very small percentage of the whole.

System of Ordering

In the office the material is ordered from carefully prepared data sheets and records are kept of all shipments. Thus, when the job begins to call for more than is scheduled we can quickly check up and determine whether the cause is due to an error in estimating (and errors have been made) or in ordering or shipping. As each shipment arrives on the job a receipt is sent in to the office, thus enabling us to check invoices and assuring us that the material has been provided.

Foreman's material invoices, foreman's material requisitions and foreman's material transfers (Fig. 1) are special forms provided for the use of the man on the job to notify us of material received, material required, or material used on some other work other than the contract. We instruct the men to use these forms rather than to embody the information in letter form.

Organization. Our usual practice is to send the man who is to have charge of the work, from Indianapolis, a man whom we know and who is familiar with our methods. Occasionally, when good labor is scarce we will send a second man. The working force is recruited by the man in charge. About the only thing we have to do in this respect is to see that the gang does not get too large or top-heavy and that good results are obtained. After all, it is the figures on the book that count. If costs begin to run up, we check up the number of men and usually have some pertinent suggestions that are not always pleasing to the general contractor, whose constant cry is always for more men so he can pour his concrete fifteen minutes after the last form is in place.

Right here I want to state that one of the biggest arguments we have on

every job hinges around the number of men used on slab work. The general contractor finishes his form work and wants to start pouring immediately with apparently no regard for the electrical contractor. We are expected to get the pipe in during the night, or use a man for every foot of pipe, or to use any methods we can, so long as we do not consume any time. We take a very definite stand on this point early in the game, and insist on sufficient time to install our work efficiently and properly and without over time unless we are reimbursed for the excess time. If every one of you here would stand pat on this point and not be stampeded we would all command more respect and receive more consideration for our right, the right of sufficient time to install our work correctly and efficiently.

Progress Reports

Each week the foreman turns in a report to the office showing total hours work (Fig. 2) on each branch of the job, the amount of material installed and remarks as to the progress made during the week. From these and the daily time records we compile cost records and graphic charts which keep us pretty well informed as to progress.

Once a month or oftener, as the conditions of the job require, the office engineer who has the particular work in charge visits the job to check up. When everything is running smoothly this is a matter of general inspection and observation. Any bothersome details that may have presented themselves since the last visit are threshed out and settled. Physical progress is checked against the progress records kept in the office. Materials are checked up, subsequent operations are planned and in general everything is ironed out for the next period. Occasionally it is necessary to take drastic steps, if conditions require it. On the final trips the work is combed carefully and checked against the plans and specifications preparatory for final inspection and acceptance.

Financial Aspects

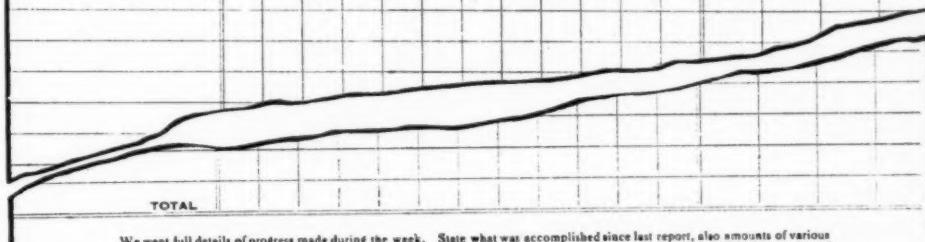
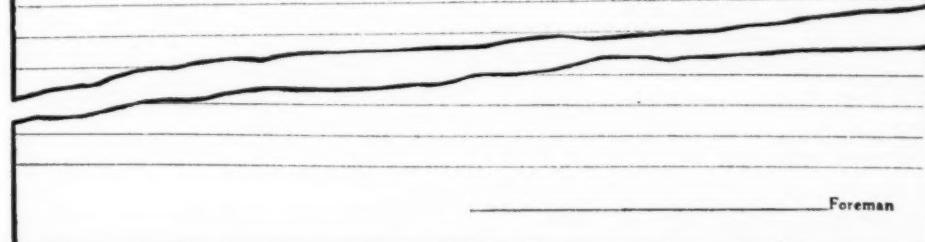
Last but not least by any manner of means is the financial side of the transaction consisting of the records and collections.

The cost records of our jobs are kept on special forms in a separate looseleaf book. These forms are so arranged that the costs are kept and totaled under the same headings that are used in the estimate, thus making it possible to see just where we stand at any time compared with the estimate.

The subject of cost keeping is too involved to be gone into at this time, and so I shall not attempt to do so. However, we endeavor to know, as I have said, just how the costs are running as compared with the estimates and so forestall possible losses.

Once a month applications for payment on account is made. As this duty falls on me, I have made quite a study of the subject and can assure you it is of considerable more interest than it might seem. If care is used in ordering material so as to have it on the job at

spective proportions of the total contract amount. Each month we bill the percentage completed of each of these divisions. This makes it easy for the architect or owners' engineer to check our application and owing to the fact that the application is always made out in a logical method and is in cold figures, he is more inclined to pass it as it stands than to argue over the matter. Each monthly application shows the total contract, value of work completed, amount retained, previous payments and amount due. In this way our

THE SANBORN ELECTRIC CO. INDIANAPOLIS, INDIANA		
Foreman's Weekly Report		Week Ending <u>19</u>
Job Name _____	Contract No. _____	At _____
WORKMEN	PUT OPERATION NUMBERS WORKED ON HERE	
TOTAL HOURS OF EACH OPERATION FOR EACH WORKMAN		
		
TOTAL		
We want full details of progress made during the week. State what was accomplished since last report, also amounts of various materials installed. For example, number of feet of each size conduit installed, amount of each size wire drawn in, number of panel boards installed, etc. If concealed work, give number of outlets wired to.		
		
Foreman _____		

Foreman's Weekly Report

the right time, and if your cost records are correctly kept, it is possible to cut down the amount of money tied up in a job to a very small amount and sometimes under favorable circumstances to have no investment at all during the greater part of the job except the money paid out during the current month. Of course, as the job nears completion, the ten to twenty per cent retained and the fact that the owners tend to tighten up towards the end of the job, the unpaid balance will be larger than at first.

On larger work we divide the job into several natural divisions, such as conduit work, wire and cables, switchboards panels and finish, special apparatus, etc. To each of these divisions we assign a value representing their re-

accounting department can see to it that collections are made promptly.

I fully realize that perhaps I have said nothing that is new or novel to any of you, but I trust that you have been benefited by hearing some of the things which have proved themselves of experience to have been beneficial to us in performing our large operations. I myself have benefited by the fact that I have been compelled to think over again and put on paper in a logical way our system which has proved to us again and again to be successful. We have found by experience that when things go wrong it is not due to a lack of system but a failure on our part to conform with the system in all its details.

Handling the Big Job in a Big Way*

By ALLAN COGGESHALL
Hatzel & Buehler, Inc., New York City

THE biggest thing to my mind, about a large piece of electrical construction work, say, in an industrial plant for example, is that the fundamental aspects of it are not electrical at all. They may be industrial engineering, or factory planning, or something else, but they are only very incidentally electrical, inasmuch as electricity serves as a ready medium for accomplishing the desired ends.

Some knowledge of electricity and how to use it therefore is really only the A, B, C of mental equipment with which a person should be possessed who would really attack the big construction problem with a view to making a marked contribution to the work and perhaps leave a few discernible footprints on the sands of time.

Almost every building that is designed is planned for human occupancy of one kind or another. It is usually necessary to put a great many other things besides human beings into the buildings and these are generally to assist the humans in their occupations, recreations or comforts. These other things may be desks, furniture, machines or what not, they all play some part in helping the human to do what he has to do or wants to do in the building.

As our civilization has advanced, it has developed that our modern human is much more choice as to how he does his various stunts than of old, and electricity has become more and more a very useful medium to help him do things more easily or more of them in the same time.

The Electragist's Job

The electragist has a big job to do, one that will take all his powers, but I think he can have a mighty good time in the process.

These buildings that are designed for human occupancy, are also designed by humans; human beings who generally are not supermen, but just regular folks who have limitations in conceiving of the finished whole, while as yet there is none of it. When these plans reach the hands of the electragist, they may say very different things to him depending on the size and nature of the

*Address presented at 24th Annual Convention, A. E. L., West Baden, Ind.



Allan Coggeshall

particular electragist who receives them.

The electragist I would like to talk about will react very differently from the electragist I would prefer to pass over. The latter will see on the plans certain electrical notations and markings and being a skillful and business like person will quickly run his rotameter over the plans and apply his counter and in a jiffy will be able to tell the world how many dollars it will cost to make an electrical installation in accordance with plans and specifications—and that's all he can tell the world.

The other electragist, the one I would really like to talk about, will be able to do all that the first one can do, but also the plans will talk to him, or rather he will make the plans talk. The plans will say to him, now this building is designed to accommodate factory employees and machines for the manufacture of automobiles, automobiles in their entirety from forgings to finished cars. Or, felt hats perhaps, from the rough felt to the finished hat, ready to put on. In either case a train of thought

will have been started that has to do with the particular occupancy of the building. Every line that is shown on the plans, every figure, will be interpreted in the light of that one central thought, "What are the human beings who are going into this building going to do there, and how can the electrical work best help them to do it?" The plans themselves are at best only one set of human being's interpretations of the needs of the building expressed electrically. As such they make a very interesting document, and just as some books are well conceived and finely expressed, so are some plans, while others are conspicuously faulty.

Engineering is so many things nowadays that I believe it might embrace a corner for the electragist, and I for one would wish him to be a good bit of an engineer and at the very least, I insist that he be a good *applicationist*. As such I think he has a big part to play in the general scheme of things.

In reviewing and studying a set of plans prepared by another he should be able to get in tune with the author, know his language, guess at his thoughts in doing thus and so, and test his results and agree or disagree with him as to whether the best means have been employed to accomplish the various results sought. When this electragist has completed his review of the plans he ought to be pretty well primed to talk the plans, not electrically so much, but in terms of the occupancy functions of the building and how well the electric layout serves this purpose.

Occupancy Densities

In any building designed for human occupancy there are certain limits to the density at which it may be so occupied and since the electrical installation is so intimately related to the occupancy needs it follows at once that these limitations may be translated into electrical requirements or may be expressed electrically. This is true, no matter what the nature of the occupancy, only the limits will be different for different occupancies. These differences, by the way, do not cover anything like the wide range of values that might be expected from a casual consideration.

Occupancy densities may best be expressed electrically in terms of watts per square foot of floor area. If great refinement is desired this may be subdivided to show figures for the actively occupied areas and figures for the serving or artery areas such as aisles, walls, toilets, etc. It is interesting to note, in passing, what a large proportion the latter really are of the whole. For example, it is seldom possible to design a building so as to make the active area greater than 70 percent of the whole, be it a machine shop or office building. In other words, the space given up to elevators, halls, stairways, toilets, etc. is a very considerable part of the whole. In a way, the ratio of useful area or rentable area to area as a whole is a measure of the efficiency of the building as an investment.

Electrical densities may be subdivided into light and power requirements, this latter subdivision being, of course, more important for the industrial plant than for the office building or residential building, although the office building is becoming more and more a large power user, likewise the home.

Load Factor

Focussing attention, for the moment, on the industrial plant where the light and power requirements may be considered separately, each may be expressed in terms of watts per square foot of total floor area. And each will have two values for any particular plant. That is, there will be a value for wired or connected density and a value for instantaneous or working density. The ratio of these two values is sometimes called the "load factor." This load factor has an important bearing on the design of generating plant, or service feeders and the internal feeder system. The ultimate branch work on the other hand, is dependent more on the wired or connected density and this likewise affects the size of panel boards for termination of branch circuits. The principle of load factor, however, is sometimes also applicable for the branch circuit design in this way. In laying out a floor area for branch circuit work it may not be known in advance just what specific locations each and every unit to be supplied with current will occupy. However, the probable number of total circuits ultimately required may be known and these must be made available for use in any quarter of the floor. This may be accomplished by means of a system of trunk conduits for home runs or interconnections, conduits large enough to contain two, three

or four circuits each. Not every spot on the floor will require the full density and so it will be safe to provide something less than the full quota of circuits, provided they are made available for use in any quarter of the space by means of adequate raceways. Here the principle of load factor or diversity factor has been employed, but has been applied to the raceways rather than to the copper as is the case with the feeders.

The Diversity Factor

This principle of load or diversity factor exhibits itself in every branch of engineering. For example, in New York City—Manhattan Island, every one has the privilege of crossing over to Brooklyn whenever he or she pleases and vice versa. But it would be physically impossible for everyone to do it at once. There wouldn't be bridges, ferries or subways enough to carry them. In the same way in a telephone system of a number of exchanges, anyone in any exchange has the privilege of talking to anyone in any other exchange. If all exchanges but one should call the remaining exchange at the same time they couldn't be connected at once.

The answer is they don't, and because they don't it's good engineering to provide only enough facilities to accommodate the loads due to average traffic conditions with a small margin to spare.

Exactly the same reasoning applies to the design of electrical distributing systems within the large industrial plant and applies for both light and power. A 20 H. P. motor doesn't take 20 H. P. worth of current from the mains just because it is a 20 H. P. motor. It only takes full current when it has 20 H. P. of work assigned to it to do, and only takes it while it is doing the work. And so in choosing feeders to carry a number of such motors it is well to know the load cycle of each motor and when these cycles are known to be out of phase with each other to take advantage of this in discounting the group feeders, to proper working limits.

Economy in Designing

Also in the matter of lighting panels every circuit provided in a panel is inherently capable of carrying 15 amperes of current. But for a panel to supply a diversified floor area with lighting, not every circuit will be so simultaneously loaded and it would be extravagant to provide full capacity in the feeder. Here again a 20 circuit panel doesn't take 150 amperes on a three wire main because it is a 20 cir-

cuit panel. It only does so if, and when the floor occupancy of space supplied demands that it shall, and it doesn't usually so demand.

In reviewing a set of plans for estimating, or undertaking sales negotiations, or preparatory to starting construction operations, some such reasoning and thoughts will run through the head of the last described electragist and he will feel that he has caught hold of the pulse of the job and knows something of what it is all about. If the lighting feeders as laid out would carry a working load of say three watts per square foot of floor area he would first look up the question of length and drop and endeavor to justify the sizes in every way. Failing to find sufficient supporting reasons, and knowing that $\frac{3}{4}$ watt per square foot is usually ample for a pulling load in a lighting feeder supplying a diversified floor area, he will seek to find the proper manner in which to make use of the discovery, in redesign of feeders, assignment of more panels to same feeder, negotiation with engineer or owner, etc.

Providing for Future Growth

Often larger feeders are employed than necessary in order to provide for future growth, additional stories, or extensions. Often in such cases other and better means may be provided for such future growth and without tying up investment in the meantime. Whatever the case may be, once the electragist has put himself on a talking basis with the planning engineer or owner, has allied himself with the owner to help accomplish the ends sought, then by exerting himself as an electrical applicationist he can serve and incidentally find many ways to improve his own situation.

There are many factors that might be cited as conspicuous talking points by means of which common ground may be established between owner and electragist, but the ones chosen above and dwelt upon at some length will serve to indicate somewhat the manner of translating occupancy needs into electrical data.

With the job underway the number of such points of contact should increase and the ground of common meeting become more and more fertile and green.

The installation of electrical lighting and power systems in a large industrial plant is itself an industry and one that permits of the application of many of

(Continued on page 43)

Retailing Radio at a Profit*

By R. M. KLEIN

General Manager, F. A. D. Andrea Company, New York City

THE success of any industry is contingent on two factors—one is men and the other is material. The manufacturers of radio, and, in turn, the jobbers and the dealers, have failed to recognize the magnitude of the business, and the necessity of putting it in charge of proper men. That has, to a large extent, been remedied by the manufacturers; and the jobbers, in the past year or so, have taken the radio departments out of the hands of thirty-five or forty dollar a week men, and put men in of much higher caliber to take charge of those departments. And the retailers are fast coming to the same idea.

Statistics indicate that the rate at which the business is running, at the present time, is from two dollars and a half to three dollars per capita, which gives an idea of the business available in any given locality.

If we take a medium sized town of thirty thousand inhabitants, the surrounding district which that town serves will probably bring the population up to a total of forty thousand. At two dollars and a half a head we have a hundred thousand dollars worth of potential radio sales. That is certainly of sufficient magnitude to warrant a hundred thousand dollar style, and the radio dealer in that town should select a man for his radio department, competent to cope with a proposition of that nature.

The type of radio sets, today, can be roughly put in four divisions. First is the Neutrodyne set, and second, the Superhetrodyne; and still another division of the loud set, and a fourth division of the Regenerative set.

There was a time when a dealer could afford to carry in stock practically all of the leading makes of sets. Today he cannot operate profitably by handling over two or three makes, and eventually he will probably come down to handling but one make.



R. M. Klein

of radio business, because it is, manifestly, an electrical proposition. But to get it, the Electragist must treat it as a factor of considerable importance in his work, and a proper man put in charge of it.

In almost any phonograph store today you will see a very handsomely decorated booth, or compartment, with a radio set ready for operation. The phonograph dealer doesn't wait for the prospect to come into his store. He has a list of every person to whom he has sold a phonograph since he has been in business, and he has a list of everyone to whom he has sold records. He solicits those people with a view of selling them a radio set. Few electrical stores go after the business in this way.

The average price of a radio set today, will probably run around two hundred and fifty dollars. Now, a two hundred and fifty dollar set, with a margin to the electragist of thirty-five per cent on the sale price, which means a gross profit of anywhere from eighty to a hundred dollars on each individual sale, certainly leaves room for broad and aggressive selling activity. It leaves a dealer a margin for local advertising in the newspapers—advertising, which, in my opinion, should be conducted on the basis of not a four or five inch ad every day in the week, but rather a twenty or thirty inch ad twice a week—or less, if the town is small, and the volume of business doesn't justify it. You should aim, rather, at large space in the newspapers, and less often.

Let the picture in the advertisement tell the story, and keep your matter separate. Any manufacturer will gladly furnish cuts and mats designed by experts, and copy, for carrying on local advertising.

What applies to local advertising applies in a more or less general sense to window dressing. Practically every window that I have seen, devoted to radio, was over dressed—too much in it. My con-

(Continued on page 41)

Pointers for the Contractor-Dealer Handling Radio

Put a good man in charge of the department. Pick a make of instrument you believe in and feature it.

Have a pleasingly decorated demonstration booth and a set always ready for operation. Use your list of regular customers as your first prospect list.

Use big advertising space at intervals rather than small space daily. Don't crowd your window displays.

Don't try to give service for nothing or at a loss.

Pick spectacular means of demonstrating such as temporary lodge, country club and country dance installations.

Use your dealer-helps.

—R. M. KLEIN.

Multiplying Profits Through Increased Turnover*

Some Concrete Suggestions Simply Told Which Show How to Build Profits
Through a Proper Control of Working Capital

By JOHN A. CLARK

Westinghouse Electric and Manufacturing Company

I. Budget All Sales, Purchases, Inventory and Expense Quotas, and Maintain Accurate Records of these Elements Throughout the Year.

Using past records as a guide, estimate the sales in each line by months for the next six months or longer. Knowing the physical inventory on hand, estimate what the inventory must be at the beginning of each month in order to handle the above sales volume which has been budgeted. From these two sets of estimates, namely monthly sales and inventory, lay out a schedule of new buying for each of the next six months. Finally, make up an itemized account of expense by months. Now arrange a simple system for reporting the actual sales, purchases, inventories and expenses for each day, week and month.

Regulate Future Purchases According to Past Sales. If actual sales have fallen below estimated amounts, reduce future buying in line with stock requirements. In case sales have exceeded expectations, increase new buying. If certain goods are slow movers, give them special attention. When this concentrated effort indicates such goods are inherently slow moving, they should be estimated.

Shift Sales Effort from One Line to Another as Demanded. If sales on any profitable line are shrinking, give this line special attention until it has been brought back to normal. Feature delinquent merchandise in the windows, show cases, and at the front of the store; use the mailing list and newspapers in making a drive for greater sales.

Develop Profitable Lines. When the dealer learns from these records which lines move fastest and return the greatest profits, he should concentrate upon these lines and develop them. Perhaps the adoption of a comprehensive system of records as suggested above will show



John A. Clark

that not enough attention has been given to the more profitable lines.

Quicken the Turnover. Constantly keep in mind the aim to speed up turnover. Continue to scale down stocks and re-set stock limits until they are at minimum practicable amounts.

Regulate Expense According to Sales. Analyze the itemized expenses and determine where, if any, individual expenses are running out of line. Budgeting and maintaining proper records show the progress of the business, take guess-work out of operations, and furnish a valuable guide in controlling sales, purchases and expenses. The system does not have to be complicated. Any system will suffice as long as it will show at all times how sales, stocks and expenses are running; how much to buy; how much cash on hand, etc.

II. Plan the Year's Finances in Advance.

When laying out the budget for the coming year, every merchant should figure on providing enough cash to pay all purchases within the discount period; to meet all expenses during the year; to cope with emergencies; to handle credit accounts and to supply reserves for incidentals, depreciation, losses, etc. As the year progresses, close check should be kept on the trend in finances and on variations in budget calculations.

Always remember when running short of cash, to get it first out of stock, if possible, and second, out of the bank.

Make a profit and loss statement the first of every month so that it may be observed how profits are running and whether or not the individual expense items are bearing the proper percentage relationship to net sales. This study will reveal the leaks in business and the trend in various elements of the overhead.

III. Maintain Minimum Merchandise Stocks.

If the dealer is not already carrying small stocks, he should begin a new order of things by reducing inventories in each line to rock bottom.

(a) *Small Stocks Reduce Expenses.* Without any special knowledge of merchandising, every dealer knows that merchandise on his shelves accumulates a burden of interest, insurance, rent, taxes, depreciation, shrinkage and obsolescence. The smaller the amount of stock the dealer carries, the faster he sells it out and the smaller will be his expense of merchandising.

We will say an electric merchant sells annually \$1600 worth of a certain line which costs him \$1000. His overhead expenses we will assume average 30 per cent. Now suppose through the use of a higher rate of turnover he is able to reduce expenses 10 per cent, i. e., 10

*Address presented at 24th Annual Convention, A. E. L. West Baden, Ind.

per cent of 30 per cent. The effect of this reduction in cost will then be:

BEFORE (30 PER CENT OVERHEAD)	
Annual Sales	\$1600
Sales at Cost	\$1000
Overhead 30% of \$1600	480
Investment in Merchandise	1480
Annual Earnings	\$ 120
AFTER (27 PER CENT OVERHEAD)	
As before	\$1600
As before	\$1000
27% of \$1600	432
Investment in Merchandise	1432
Annual Earnings	\$ 168

This example shows that speeding up the dealer's stock turnover, although apparently making only slight changes in expense totals has, in our example, expanded the net returns of the business from \$120 to \$168. When one considers that heat, light, rent, clerk salaries and many other items of overhead expenses are fixed, it becomes all the more important for the retailer to resort to the higher turnover policy.

(b) *Small Stocks Increase Working Capital.* Using the above example, let us assume the dealer has been carrying an average inventory of \$250 and that he decides to reduce his stocks to \$100. That is to say, he is going to speed up his turnover from 4 to 10 times per year as will be noted from the following example:

BEFORE		AFTER
Value of sales	= \$400	
Sales at cost	= \$250	
Overhead 30% of \$400	= 120	
Investment	\$370	
Money released	\$370 - \$148 = \$222	
		\$160
		\$100
		30% of \$160 = 48
		\$148

In the above example, the dealer, when maintaining stocks to the amount of \$250 had an average of \$370 tied up in goods compared with \$148, or \$222 less when stocking only \$100 in merchandise at a time. That is to say, in the second example the dealer had \$222 in surplus funds (not tied up in stock) which he could use in promoting additional lines in his business. Let us say, with this additional working capital, he takes on a new line of electrical goods or else gives intensive sales effort to certain lines he has not been promoting. If these additional activities net 5 per cent profit, the dealer's profits will be:

BEFORE	
Investment in original Merchandise	\$370
Annual Profit	\$120
Investment in New Lines	—
Annual Profits in New Lines	—
Total Stock Investment	\$370
Annual Profit	\$120

AFTER	
Investment in original Mdse.	\$148
Annual Profit	\$120
Investment in New Lines	\$222
Annual Profits in New Lines	\$111
Total Stock Investment	\$370
Aggregate Annual Profit, All Lines	\$231

These figures prove that speeding up the annual turnover from 4 to 10 times, and investing the surplus capital in additional lines yielding the same percentage profit, actually expands the dealer's net dollar earnings to almost twice his original income.

Furthermore, if the new plan enables the dealer to take his cash discount on all bills, a thing he has probably not been able to do before, then, in a year's time, cash discount earned will increase his profits as follows:

Annual Sales Cost	..... \$1000
Cash Discount on original Merchandise	..... \$ 20
Profit on original Merchandise	.... 120
Profit on Additional Lines	.... 111
Aggregate Net Earnings	..... \$251

If we go back to (2) and take into account the fact that the higher rate turnover would reduce expenses 10 per cent, then the additional saving of $(10\% \times 30\%)$ 3 per cent. of \$1,600, or \$48, would naturally be added to earnings. That is, the new plan of speeding up the turnover, through reduced

credit released by reducing the size of current stocks.

The foregoing examples are slightly exaggerated in order to emphasize the principles involved.

(c) *Small Stock May Hurt Profits.* Up to this point the many benefits of the quick turnover principle have been emphasized, but before concluding the subject let us analyze the working of turnover a little deeper.

Every merchant knows he needs sufficient merchandise for window, showcase and counter display purposes in addition to a handy stock to supply the counter sales. The experienced dealer also appreciates that time is required for replacement; that he must consider such things as the size of standard packages, the discounts for various sized orders, the cost of cartage and supervising accounts payable; that to be out of stock on any item means the loss of business and, in some cases, the loss of customers also; that the demand for electrical products is never uniform, from month to month, nor from year to year.

IV. Specialize on the Fastest Moving Stock.

The largest profits during a year's time are in the quick sales, not in the long profit merchandise. If the dealer is handling brands that are nationally advertised the customers take the goods without argument, and no time is lost in trying to convince people of the merit of unknown brands.

In the case of certain electrical products it may be desirable to carry several sizes, styles or brands, to meet the trade demands. But even under these circumstances the dealer is not justified in stocking equal quantities of each.

Normally, it will be most profitable to have a "Best Selling Full Line" on which the largest stocks will be carried. This is the line to be featured in newspaper ads, display window and store cases. Clerks should be instructed to push this line. The Best Selling Full Line will naturally be a highly advertised line of reliable merchandise which the dealer can stand in back of.

Then he may add other lines, perhaps a cheaper line and also a more expensive line.

Bear in mind that it isn't sufficient merely to carry well known goods in stock. The dealer must put his personal sales efforts behind these well known products if he is to increase sales and quicken the turnover.

Store Cost Figures

Interesting figures on the cost of doing a department store business are presented in an analysis of operating expense of these stores just published by the Bureau of Business Research of the Harvard business school. Comparison of these figures with the average cost of merchandising electrical appliances, solely, will be enlightening for dealers.

For every dollar of sales in stores doing \$1,000,000 worth of business during 1923, total merchandise cost was 71.8 percent; total expense of doing business was 26.3 percent and net

profit 1.9 percent. They turned over their stock 2.4 times. Stores doing over \$1,000,000 net sales had a total merchandise cost of 68 percent, a total expense of 28.4 percent and a net profit of 3.6 percent. Departmentized specialty stores were separately analyzed, showing a total merchandise cost of 67.1 percent, a total expense of 29.6 percent and a net profit of 3.3 percent.

It was shown also that the average cost of doing business for the firms doing over \$1,000,000 worth of business yearly was higher than for those doing under that figure, showing that a mere increase in sales does not result in economy of operation.

The Jobber's Viewpoint on Merchandising Policies

(Continued from Page 24)

popularity for their products; satisfied dealers, and a nearer approach to sound and lasting prosperity. Why should not the contractor-dealer share in all this? There is no reason save his own indifference, his own supineness and his own lack of unified effort.

I congratulate your Association upon your committee's report. It is the first militant act I have ever seen upon your part to obtain what is your due. The manufacturers and jobbers are your friends, and will look with approval upon a firm and aggressive determination to better the conditions under which you are operating. The non-technical stores are firmly established in the electrical retail field and I do not believe they will be dislodged. There is room for all, however, in the almost infinite field of electricity. If through an intelligent and vigorous following up of the committee's report, you can secure for yourselves the advantages gained by these larger interests, you need not fear their competition. Indeed their presence in the field will make it easier for you to gain the compensation necessary to your successful operations, and easier for the manufacturer, through increased production, to grant it. But the prime requisite to all this is loyalty to your organization and an increasing effort to increase its membership until it becomes really representative of your section of the industry.

I wish to thank you for the privilege of appearing before you and the opportunity of presenting the case for the jobbers in answer to the committee's

report. To an extent, the views expressed are simply my own. I do not represent officially the Jobbers Association nor the jobbing industry. I think I am safe, however, in repeating what I have just said; that the jobbers are your friends; our prosperity depends largely upon your success. We deviate from the straight and narrow path sometimes because we are human. Sometimes, also, we have honest differences of opinion with you. On the whole, I think, the majority of us recognize that our interests lie along the same lines; that our dependence upon each other is mutual; and that occasions for frank and friendly discussion, like this, while all too few, can be conducive of nothing but good for the industry. As a friend, and as a business man, I should like to see your Association wax stronger and more powerful year by year. As a believer in organization, I should like to see you reap every advantage to be derived from organization work. The majority of jobbers, I am sure, are glad to see you at last taking this militant step to further your interests. Many of them have been fighting your battles, but without your aggressive help could accomplish but little. With the new spirit of the organization evidenced by this committee's report, with a vigorous follow-up on your part, and with the friendly interest of the jobbers and manufacturers—but above all, with a unified and representative Association under capable and unselfish leadership—one may easily visualize down the vista of future years the electragist established upon his rightful plane

among the business men of his community, commanding the respect and confidence of the other branches of the industry, and, so far as this world's goods are concerned, reaping finally the reward of intelligent effort properly applied.

Retailing Radio at a Profit

(Continued from Page 38)

ception of a proper window display is one single set—the best set you handle—with practically nothing else in the window.

The question of installations and maintenance is something which practically all dealers treat differently.

I believe in service. I believe that when the radio set is sold, it should be delivered and installed, and I believe in monthly visits, to see that the thing is maintained in proper operation. But certainly it cannot be done for as low a charge as twelve dollars, as one dealer in my acquaintance attempted. I believe the installation alone should be figured at ten dollars, and that a monthly service visit, for six months, should involve a charge of fifteen dollars more.

Every local situation presents a good many special opportunities.

Take the matter of fraternal organization: The local Elks' Lodge may, once a month, give an entertainment, or the Masonic Lodge may do the same. I think any dealer can well afford to make a temporary installation there.

Golf clubs also have evening audiences, and I know of a number of cases where a complete dance program has been carried on for them by radio. There are few country communities that can afford an orchestra at fifty or seventy-five dollars for a dance, but they can get a program over the radio for practically nothing. The chances are that you are going to sell them golf club and country club installation, and that you are going to have a number of prospects.

I believe that by putting a proper man in your radio department, a judicious selection of equipment, and following the basic principles of demonstration and aggressive selling, the electragist can make a success of radio, that it is bound to produce profits for him.

The "Fedco Blue" radio insulators are described in a folder now being distributed by the Federal Porcelain Company, Carey, Ohio.

Chats on the National Electrical Code

A Monthly discussion of wiring practice and questions of interpretation, presented with a view toward encouraging a better understanding of the industry's most important set of rules

By HUBERT S. WYNKOOP, M. E.

Plumber's Line as Conduit

In overhauling an old department store it was planned to abandon an old iron pipe line formerly used for a vacuum cleaning system. The pipe line consisted of 1 1-2 inch and 2 inch sizes, with an elbow or cross fitting at each floor. A rearrangement of the electrical installation necessitated the running of additional lines; and we were asked whether we would not permit the use of the old plumber's pipe as a conduit, provided it was cleaned out and each wire was encased in flexible tubing, it being planned to place either two No. 8 or two No. 10 in each pipe. We agreed.

Base Your Appeal on a Solid Argument

Recently an electrical contractor—not an Electragist—ran some cable loosely in a dumb waiter shaft and then objected because we would not approve the job. He said that the dumb waiter had been taken out, that the doors had been boarded up and that this wasn't an "elevator shaft" any longer. We admitted this; and then we told him to go ahead and see that "the entire cable system" was "securely fastened in place" (505C) and to put the cable in the corner.

Flat Back Brackets Again

Modern taste in the design of brackets calls for canopies as nearly flat as practicable and no wider than necessary to cover the outlet box. Contractors are therefore frequently faced with the necessity of making an installation where the arms end just within the canopy so that when the fixture is set in place the wires will lie against the wall surface. Inspection departments object to this; so, pending the adoption of amended specifications for fixtures which will obviate this difficulty, contractors must expect to be required to provide some sort of metal enclosure which will keep the wires away from the wall surface—unless a concession is obtained where the wall is composed of plaster or hollow tile. A metal backing plate is suggested.

Open Wiring in Loft Buildings

Owing to the unsatisfactory electrical conditions caused by the disturbance or abuse of open wiring in loft buildings we intend, after January 1, 1925, to prohibit knob or cleat wiring in such occupancies. Metal raceway, conduit or armored cable must be employed.

Single Conductor Lead Sheathed Cable

There is no objection to the use of single conductor lead-sheathed cable for alternating current, provided all legs of the circuit are placed in one pipe. The lighting companies use this material quite extensively except for the higher voltages, and experience no ill effects. Some people assume that because the sheath is metal it will introduce induction troubles.

Automobile Wire in Fixtures

An attempt is being made to employ armored automobile wire for fixtures. The poorer grade, which we condemn absolutely consists of an armored duplex the conductors of which have no rubber over them, but merely a wind or two of cotton and a layer of what appears to be varnished tape.

Fixing Responsibility in Case of Violations

Contractors should bear in mind that, while they may have a perfectly good reason for declining to comply with a violation notice, it does not follow that the inspection department ought to yield to a demand for a certificate. The contractor hesitates to perform work not included in his contract; the inspection department declines to approve incomplete or defective jobs. As an illustration, consider the replacing of plaster about outlet boxes. If the contract is silent on this point, it seems reasonable to hold the contractor, because he is under the specific or implied obligation to obtain a certificate, which he knows he cannot get until the broken plaster is restored. Generally, then, he ought to

attend to this matter; but sometimes it is understood in advance that the occupant will do the replastering and then the inspection department ought to get after the occupant, who may be holding back as an excuse for not paying the contractor.

Inspection Service Not a Collection Agency

Why should a contractor expect the inspection service to help him collect a bill? Now and then the excuse offered for failing to remove a violation is that the defect was introduced purposely because the customer's financial standing was found to be shaky, that the contractor would proceed no further until he had been paid for the work up to date, that the placing of a violation on the work would preclude the issuance of a certificate, and that without the certificate the customer could not obtain current.

Perhaps this looks all right from the lone standpoint of the contractor but the inspection service views the case differently. We cannot compel the contractor to hurry the completion of the work, but we can and do insist that it be right, *as far as it goes*. The customer may decide whether fairly or unfairly, to call in someone else to finish the job. We cannot interfere in such a case because of the obligation to remain neutral.

Number of Poles a Circuit Breakers

Section 805-L is under discussion. If all ungrounded wires are protected by either a circuit breaker switch blade, or a fuse, is that enough? Or, does the rule require that where a circuit breaker is used, it must break *all* ungrounded wires and, if so, why the reference to "other automatic protective devices"? The weight of authority seemed to favor an interpretation which will require that "other automatic protective devices" be used in all undergrounded wires unless the circuit breaker opens *all* of them.

Handling the Big Job in a Big Way

(Continued from Page 37)

the same methods as will afterwards be employed by the industrial owner when the plant is completed. When the electragist undertakes such a job he will find that it is at the start, that he can make the largest contribution to the success of the job. That is the time to summon together all those in his organization who have studied the job or will handle it, and by intensive application to project the job into the field with the best thought behind it. The drawing board man should start his studies early and get the panel and junction boxes bought as soon as possible and it should be very urgently borne in mind that it is on the roughing work where the biggest part of the labor cost will occur. The greatest opportunities for duplication, use of labor saving tools, routing of materials, etc., will appear in connection with the roughing work, opportunities for the application of the same methods that the industrial owner will afterwards use in the finished shop.

In charting out a big electrical installation for an industrial plant it will be found again that it is not the electrical factors that are conspicuously important, but such matters as choice of proper pathways, junction box locations for tap offs, relationship with aisles, lines of machines, opportunities for connections to machines, etc.; these and many others will be the important items, matters which concern operation of the shop. Electrical systems as such must be right, but the interesting thing to the shop man is not that he has an electrical installation, but that he can do what he wants with his machines and that the electrical system may help him do it and not merely get in his way.

Importance of Roughing Work

The big accomplishment on the job for the electrical man is usually won or lost in the handling of the roughing work and this usually means the branch circuit work which must in the nature of things be the biggest part of the roughing operation since it spreads to all parts of the extended floor area. It is well worth while, therefore, to study the branch circuit work problem well in advance of the start of physical operations. It will generally be found that there is a considerable amount of duplication of scheme of design, in the circuit work, bay after bay, and some-

times floor after floor will be practically identical.

It may seem at first sight that there is nothing particularly exciting or interesting about a comparatively simple branch circuit layout. But it is the life job, the point of contact between electrical work and occupancy and also it covers the entire area of the building and absorbs the bulk of the labor cost on roughing. Therefore if a real period of time is spent on studying the layout for a single bay, and if this layout repeats itself a hundred times, it is time well spent and may mean the difference between success or failure for the entire contract.

In the August issue 1922 of "The Electragist" we published a complete tabulation of the labor costs experienced on a large industrial contract. Of the total expenditure for productive labor it should be noted that two-thirds was for roughing. In actual figures \$41,400.00 out of a total of \$64,500.00 or 64 per cent., which emphasizes in rather striking fashion the importance of giving full attention to this phase of the work.

In the October issue of this magazine, one of our vice presidents published labor cost data for a large commercial building. In this article the total labor figures are not worked out, but by the application of a little simple arithmetic it will again be abundantly apparent that the labor absorbed by the roughing operation is the lion's share of the whole.

When discussing an electrical installation in an industrial plant it seems appropriate to stress the points of similarity between the electrical job of installing and the mechanical job that will be carried on in the plant and also the points of contact during the process of installation. It is not the intention, however, to detract from the importance of the need of thorough electrical knowledge on the part of the electragist. This electrical knowledge should not, however, be too important unto itself, but should be like mathematics to the engineer, medicine to the doctor, or short hand to the stenographer and should not protrude too much. In other words, it should be the tool he works with to accomplish something that is needed by some other member of the community.

One bit of knowledge that the elec-

tralist needs and is experiencing some vexation in obtaining is a complete working knowledge of the Code. The Code is not a very exciting book to read, to sit down and attempt to memorize it, is hopeless, and yet we all need it, and packed away in it is a great deal of useful electrical sense.

In an effort to take the vexation out of using the Code and make it a more friendly book and more useable one of our officers has been laboring for some time on the preparation of a completely cross reference code index. This will shortly be ready for distribution through the Association and it is our hope that it will be welcomed as a blessed relief by all who use the Code and perhaps by some others who ought to use it more than they do.

Raleigh's New Office Building

One of the largest and most completely electrically equipped office buildings in the South has just been completed in Raleigh, N. C., according to word from the N. L. Walker Electric Company, Raleigh electragists. It is the Odd Fellows Building and the Walker company did all the wiring for lights, power, and elevator system and installed conduits for telephone and telegraph.



Raleigh Building With Complete Electrical Installation

Twenty-four 500-watt flood lights are located on the ledge above the eighth floor to light the facade of the temple.

As It Seems To Us:

The Convention

This issue is the report of the annual convention of the Association of Electragists, International, held last month at West Baden, Ind. It is made fairly complete, principally for the benefit of those who did not have the good fortune to have been present.

In more ways than one was it perhaps the most remarkable convention ever held by this Association. The outstanding feature was the spirit that was developed. Those who attended resolved almost to a man to go home and build up the "Electragist Idea" in his locality and to bring his competitors to West Baden next year.

The manufacturers sensed as never before the value of the work of this Association and they too wanted to know how they could help in building up the membership.

And how did this come about? Because there was less diversion from the business of the week so that men got to know their fellow electragists better. Because the program was nearer to their hearts than in past years. Because there was something there to interest everybody. Because the attendance was not largely from one or two big cities but was from everywhere.

Now, however, the 1924 Convention is history—we are working on our twenty-fifth—our quarter-centennial. Now is the time to begin laying plans. Let's go to West Baden next year many times stronger.

Our Answer

We have been criticised by Charles L. Eidlitz in a recent bulletin of the Electrical Board of Trade of New York for straddling when we spoke of the "convenience or appliance" outlet in our condemnation of the screw plug type.

Mr. Eidlitz with his customary vigor is pulling for the term "appliance outlet" on the grounds that "convenience outlet" is a misnomer and is meaningless.

We agree with Mr. Eidlitz that "convenience outlet" is a misnomer.

However, that is no justification for our supporting another term which in our mind is not the right one.

"Appliance outlet" is not the right term, in our opinion, for numerous reasons, among them being the following:

1—It is an electrical-man-made term and was not made with a proper conception of the way the public thinks. This industry needs a term that the public will use. It is immaterial whether or not it is to our electrical minds a definition. We can talk and spend our money and our energy but we will never get along very fast or far until we get a public-made term. To the public those little things are not "outlets." They are things you plug into—as some one once said "They are inlets."

2—if we are looking for a defining term, "appliance" outlet is very poor, because it takes no consideration of floor and table lamps. We as electrical men might sit around a table and agree that in the last analysis a portable lamp is an electrical appliance. Of course it is. But the public doesn't think so and all our defining won't change the public mind. No woman wants a lot of appliance outlets in her living room but she does want places where she can *plug in* her portable lamps.

3—The term "appliance-outlet" is not an instantaneous term. You have to sell it to electrical men even. It isn't popular of its own accord. That is the trouble with "convenience outlet." When the industry changes terms it should have a new term that is instantaneously popular, that sells itself not only to electrical men but to the public, a term that people will everywhere use automatically.

4—"Appliance outlet" will merely add another term. We now have "convenience outlet," "appliance outlet" in New York, "handy outlet" in Boston and still others. When it is decided to change it must be for a term that will displace all others, not one that will add to the confusion.

We have no name to put forward. Our suggestion is that the electrical industry take steps to learn the public mind and that the results secured be put before a group of publicity experts, men competent to weigh the public mind. From such action there should develop a term that will suit the situation much better than any term which so far has been brought forward.

The Curbstoner

An accepted term in the electrical industry is "Curbstoner," but what does it mean? It is used to mean so many things that perhaps it is well to stop for a minute and see if we really mean what we say when we use the term.

"Curbstoner" is a word of reproach. It is applied to electrical contractors who do not measure up. How? In size? Unfortunately many people through loose expression give one the impression that curbstoners are small contractors.

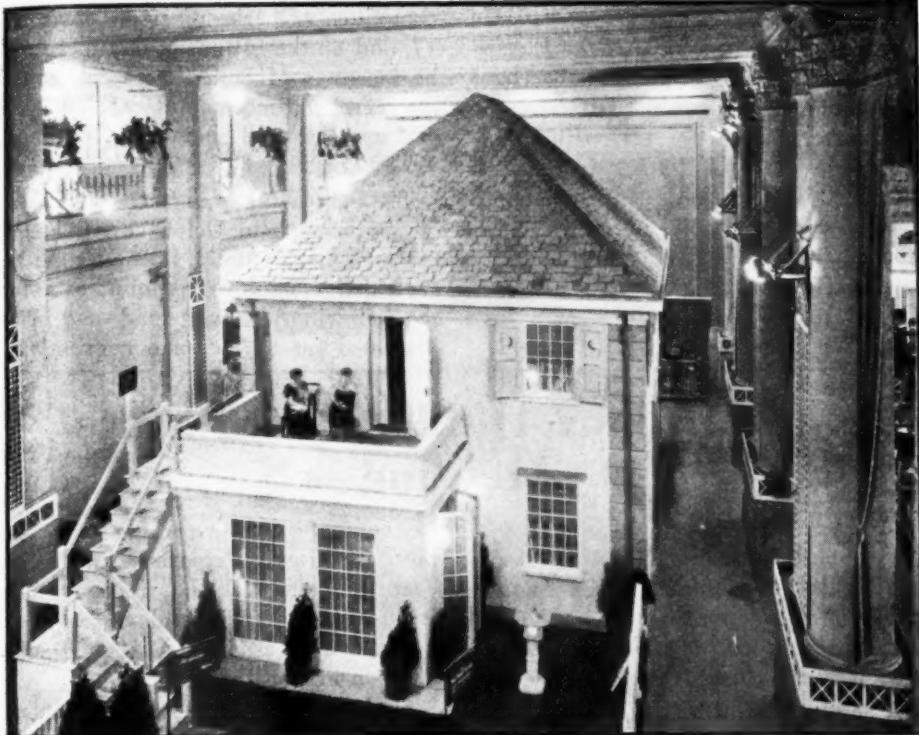
That is not fair. Almost every man has to start in business in a small way and gradually build up. Is that a disgrace?

To our mind a curbstoner is an electrical contractor who is incompetent, irresponsible, poor pay, who does cheap work cheaply and who in general brings discredit to the electrical industry.

He may be a small contractor or he may be a large contractor—whatever his size—the industry would be better off without him.

OCTOBER ACTIVITIES

New York Public Flocks to Electrical Show



National Lighting Contest Prize Home

Greater interest than ever before was aroused by the annual New York Electrical and Industrial Exposition, held at the Grand Central Palace from October 15 to 25, and the first few days upon which a report was made saw a record-breaking attendance.

Ceremonies at the opening centered around the electrical home, which is to be the first prize in the home lighting essay contest. With the presentation of the keys of the house by Frank W. Smith, vice-president of the United Electric Light and Power Company to Arthur Williams, chairman of the committee conducting the contest in New York, the house and the exposition were formally opened.

This fifteen thousand dollar house, reproduced in full size and complete in every detail, was the feature exhibit at the show. It was two stories high, and consisted of eight rooms. It was erected by the United company.

While the house was the center of interest not only for ambitious school

children, but also for hopeful parents, there were many other exhibits that claimed the attention of the throngs which packed the Palace from the minute the doors were thrown open.

The electric safety razor which massages as it shaves, the electric pants presser, the coalless furnaces and the iceless ice boxes seemed to be the centre of interest for the men, while the all-electric kitchen in the pushbutton tea-room, the dish washing machines, the clothes washers and ironers and all the other housekeeping devices drew large groups of interested women.

Lighting Equipment Dealers Establish Separate Headquarters

The National Association of Lighting Equipment Dealers has announced through its president, E. R. Gillet, that it has established independent headquarters at 1227 Prospect Avenue, Cleveland, O. R. W. Smith has been retained as secretary.

New Orleans Home Ready for Visitors

The electric home being built in the Algiers section of New Orleans, La., will be ready to throw open to the public shortly after the first of November, according to present plans of the builders. Prominent supply and service companies have co-operated in making a success of the home. The New Orleans Public Service, Inc., will furnish the power and connection and the electric fixtures and wiring have been put in by the Interstate Electric Company.

State Associations Projected for Kansas, Oklahoma, Arkansas and Ohio

Requests for assistance in the formation of state associations of electragists in Kansas, Oklahoma, Arkansas and Ohio have been received by the Association of Electragists—International, and arrangements are being made by Arthur P. Peterson, field representative of the A. E. I., to hold meetings in those states and discuss plans for forming the organizations.

During the past month Mr. Peterson has been holding local meetings in various towns in Indiana, Wisconsin, Iowa and Minnesota. On October 7, he addressed a meeting at Valparaiso, Ind., on the high spots of the A. E. I. convention at West Baden. The following day he talked before the Madison (Wis.) local association on "Making the Business Show a Profit," and went from there to Milwaukee, where he spoke before the local association on "The Fair Deal." Other local meetings were held at Oshkosh, Green Bay, Fon du Lac and Janesville, Wis. On October 22, he attended the Wisconsin state meeting, where he completed arrangements for the annual state meeting in January, 1925.

His schedule brought him to Waterloo, Iowa, in time to address the meeting there of the eastern division of the Iowa Association of Electragists.

He plans to remain in the Middle West until the end of the year. Contractor-dealers desiring his assistance in forming local and state associations can get the exact date of his arrival in cities along the route from national headquarters.

Florida Meeting Postponed

Charles E. James, secretary of the Florida Association of Electragists, has announced that the meeting of the state body, which had been set for November 17, has now been postponed until November 24. It will be held at Miami.

Scranton Central Station Company Entertains Contractors

The electrical contractors of Scranton, Pa., and a number of other guests were entertained at a dinner given in September by the Scranton Electric Company. The event is an annual occurrence and is in the nature of a visible sign of the good-will existing between the central station and the contractors. Duncan T. Campbell, general manager of the power company, acted as host for the company at a chicken dinner in the evening, which was preceded by a baseball game between the central station men and the contractors. The contractors' team, captained by Fred R. Smith, won over their opponents by the impressive score of 24 to 4. However, Mr. Campbell provided the feature of the game by making a home run, which Babe Ruth need not have been ashamed of. In addition to the baseball game, there were field sports with prizes for all the winners.

Commerce Department Publishes Retailing Investigations

Two new reports on investigations in the retailing field have just been published by the Domestic Commerce Division, United States Department of Commerce. The first takes up "Budgetary Control in Retail Store Management" and goes into the purpose of budgetary control, co-ordination of the activities of a business, centralizing executive control, making forecasts and recording results, division of budget for control, sales budget, merchandise budget, operating-expense budget, and advertising budget, and also discusses the advantages and disadvantages of budgetary control.

The second report is on "Retail Store Location," and discusses this from the point of community, market or trade territory, personnel, banking and finance, and government regulations. There is also a chapter on site location, taking up in turn physical location, analysis of traffic, nature of the surroundings, store building and construction,

and relation to consumers' buying habits.

The data in both bulletins have been gathered by Laurence A. Hansen, who has served in turn as secretary of the Boston Retail Board of Trade and as managing director of the Massachusetts Retail Merchants Association.

New Officers for Manufacturers' Council

At the annual meeting of the Electrical Manufacturers Council at the Hotel Cleveland, O., held in the latter part of September, officers for the coming year were elected as follows: Chairman, Clarence L. Collens, Reliance Electric & Engineering Company, Cleveland; vice-chairman, D. R. Bullen, General Electric Company, Schenectady, N. Y.; treasurer, J. W. Perry, Johns-Manville, Inc., New York City.

Jobbers' Annual Meeting at Cleveland

Officers of the Electrical Supply Jobbers Association are now planning the program for the annual convention of the association to be held at Cleveland, November 17 to 21, according to the announcement of Franklin Overbaugh, secretary. The meeting of the executive committee will take place on November 17, and on the following day there will be meetings of both the executive and the merchandise committees. The general meetings will be held on November 19, 20 and 21.

The three-day quarterly executive meeting was held October 7, 8 and 9 at the Sagamore Hotel, Rochester, N. Y., at which committee appointments for the following year were made and plans discussed for the national convention.

Californians Hold Annual State Meeting

Registration of over two hundred delegates at the 1924 convention of the California State Association of Electrical Contractors and Dealers, held at Santa Cruz in the latter part of September, was a feature of one of the most successful meetings ever held by the association. Among those present were members of the Electrical Exchange of San Diego and also of the Electrical Exchange of Los Angeles.

One of the first subjects discussed at the general business meeting on the first day was that of the tie-in with the Association of Electragists—International. The opportunity extended to the state association to become affiliated with the international body was explained by Clyde L. Chamblin, San Francisco, and by unanimous vote it was decided to join the A. E. I.

Later in the session, Reed Hayes, of the Eureka Chamber of Commerce, spoke against the initiative measure on the November ballot proposing to exclude all water and power development along the Klamath river for the benefit of a few fishermen, and H. W. Stitt, city electrician of Fresno, outlined the aims and objects of the California Association of Municipal Electrical Inspectors, and asked for the support and co-operation of all electrical contractors and dealers.

Earl Browne made a report of work being accomplished by the State Association Code Committee. He stated that

the committee was working with the City Electrical Departments of San Francisco and Oakland, revising their ordinances and wiring rules in which it is planned to establish wattage limitations on branch lighting circuits.

At the end of the meeting, President Lemoge was unanimously re-elected for the coming year. The following members of the association were elected to serve on the executive committee for the ensuing year, or until their respective districts selected a successor: H. A. Courtright, Fresno; A. K. Carson, Bakersfield; W. A. Murphy, Stockton; J. C. Hobrecht, Sacramento; J. H. Hilfiker, Eureka; H. W. Jacobs, Santa Rosa; Earl Wilson, Napa; Fred Doerr, San Jose; G. Walter Spencer, Oakland; Walter Cox, Santa Cruz; Edward Martin, San Francisco.

Two hundred and forty-one convention delegates were seated at the banquet Saturday evening. During the banquet trophies were awarded to the prize winners in the various sporting events. The Sacramento members were awarded the attendance trophy for the largest percentage of attendance from any district.

Clyde L. Chamblin was introduced as the speaker of the evening. He made a talk on association matters and reminded the members of the obligation they had just undertaken by affiliation with the Association of Electragists, International.

New York Independent-Associated Meeting

Nominations for officers for the coming year were opened at the regular October meeting of the Independent-Associated Electrical Contractor-Dealers of New York, held October 8. The nominations will be continued at the November meeting and the election will take place in December. Explanation of the new rulings on installations, adopted by the United Electric Company, was given by Charles J. Platt, superintendent of installation; Albert J. Allen, superintendent of test department; A. F. Berry, commercial engineer; and L. A. Scofield, of the power engineering division.

At the beginning of the meeting a report on the A. E. I. annual convention at West Baden was made by Louis Freund, president of the Independent-Associated.

1923 Fixture Production Over \$60,000,000

The Department of Commerce has announced that, according to the data collected at the biennial census of manufactures, 1923, the establishments engaged primarily in the manufacture of gas and electric fixtures (not including lamps and reflectors) reported products valued at \$60,649,530, an increase of 41.4 per cent as compared with 1921, the last preceding census year.

In addition, gas and electric fixtures were manufactured to some extent as secondary products by establishments engaged primarily in other industries. The value of such commodities thus made outside the industry proper in 1921 was \$4,287,657, an amount equal to 10 per cent of the value of products reported for the industry as classified. The corresponding value for 1923 has not yet been ascertained, but will be shown in the final reports of the present census.

Christmas Sales Helps

The Society for Electrical Development has produced some special Christmas material which will work in with sales helps supplied by most manufacturers. The featured material this year is a window display background panel in seven colors, 34 inches by 60 inches, carrying the slogan "Give Something Electrical," the slogan adopted by the industry for the year.

A set of nine figures of Santa Claus, four pointing to the right and five to the left, 6 inches wide and 8 inches high with easel background will be another

unit of this special material. Other pieces will consist of folders, booklets, poster stamp and wreath.

A descriptive folder with prices can be obtained from The Society for Electrical Development, 522 Fifth Avenue, New York.

Winnipeg Association Elects

Officers for the coming year were elected at the last meeting of the Winnipeg Electrical Contractor-Dealers Association. The new president is J. H. Schumacher, of the Schumacher-Gray



W. A. Straith

Company. W. A. Straith, of the Western Elevator & Motor Company, Ltd., is vice president, and S. F. Ricketts, of the same company, is the new secretary. The executive committee includes the officers of the organization and J. M. Russell, J. Turner and L. B. Dickinson.

National Residence Market Survey

The fifth edition of "Customers vs. Population," a compilation which represents a national survey of the number of wired homes, has just been issued by The Society for Electrical Development. This manual contains seventy pages of figures covering hundreds of communities throughout the country and represents about 98 per cent of the total number of wired homes in the country up to December 31, 1922. Figures are also given for each state, with an estimate for the year 1923.

The manual also contains maps showing the wired homes saturation of each state, comparing the figures given in the

fourth edition with those appearing in the fifth addition.

Copies of the manual are available to non-members of the Society at \$3 each.

Rhode Island October Meeting

On Thursday evening, October 16, at the Turks Head Club in Providence, the Rhode Island Electrical League held its first dinner meeting this season. Roger Gordon of Pawtucket read a report on the Home Lighting Contest, which indicated that Rhode Island is going to have one of the most successful contests in the country. Unable to gain the co-operation of the schools to the extent of having the material distributed to the children through the schools, announcement cards are being mailed to 110,000 children, six ten-minute radio talks are being given by Frederick W. Bliss, talks are being given before the Church clubs, the boys' clubs, parent-teacher associations, and other clubs.

By October 16, 850 children had already made requests for primers though the campaign to reach the children had not already gotten under way. The chairmen of the various committees appointed in connection with the contest are H. M. Grant, prizes; H. E. Watts, window displays; A. H. Allcott, publicity; F. W. Bliss, judges.

H. E. Dawson, secretary of the League, stated that the League would distribute all the primers and the registration cards would be distributed by all in the industry. He stated that the radio had already proved very effective, the announcement made over the air of the number of pupils from the different schools which had entered the contest had brought in many applications from other schools.

Julius Daniels, chairman of the commercial section of the New England Division of the N. E. L. A., next gave a short talk on the lighting contest. He said that college girls were writing essays though they knew they were not eligible for prizes. He briefly traced the history of lighting bringing out the point that the intrinsic brilliancy of the units did not materially increase until 1905, when the metallic filaments came into use. He pointed out that the brightness of the lamps used today is about 2,000 times greater than that of the first lamp made by Edison, and that though the lighting of stores and factories may be regulated by law the lighting of the home will be done properly only through a great educational campaign such as is now being conducted through the home lighting contest.

Birmingham Electric Home a Success

Thirty thousand persons in ten days was the record of visitors at the first electric home opened for exhibition in Birmingham, Ala., according to figures supplied by the Birmingham Electric League. The home was opened to the public September 12.

Much interest in the home was created by the league by means of tying in its endeavors with those of a Birmingham daily paper, "The Age-Herald," which gave the project a great deal of valuable publicity. The house was placed in a highly conspicuous location, topping the crest of Milner Heights one of the highest points in Birmingham.

"Mr. Fix-it" Attacked

The Insurance Department of Raleigh, North Carolina, is starting a movement to curb the activities of the electrical "handy man about the house," whose patching of electrical jobs is responsible for the greater percentage of electrical fire hazards. The card shown

If You Know How

It is just as easy to fill a prescription as it is to wire a house for electricity. Would you let an electrician fill a prescription for you? Then do not call upon a druggist to do your wiring.

Short Circuit

A careless person wraps an electric cord around a gas fixture, a nail or convenient hook in order to shorten the wire. Eventually the insulation wears off, a short circuit occurs, and then another fire.

The Open-Knife Switch

Do not take chances with open-knife switches. They are dangerous. Use an inclosed switch of the safety type.

*Make North Carolina Safe
for Life and Property*

INSURANCE DEPARTMENT
RALEIGH, N. C.

here is being distributed to electrical consumers in an effort to convince them that electrical work should be done only by qualified electricians and in non-technical language shows how carelessness can cause a short-circuit resulting in a fire. The danger of the open-knife switch is also mentioned.

Joint Committee Distributes A. E. I. Merchandising Report

At a meeting in New York City, October 16, of the Joint Committee for Business Development it was resolved that the report of the trade policy committee of the Association of Electragists International, together with a copy of the address of W. R. Herstein at the A. E. I. 1924 convention be sent to the members of the Joint Committee for Business Development, with a letter embodying the suggestions of the nominating and program committee and a request that the address and report be studied prior to their discussion at the January meeting.

A plan was adopted providing that the chairman should be elected at the annual meeting to be held about January 15 next from the membership of the committee. The secretary will be

appointed at the same time. Frank W. Smith of New York and Walter H. Johnson of Philadelphia were elected members at large.

Committees of one on the activities of the Electric League Confederation and on the use of illuminated poster boards for national advertising were arranged for and a "uniform ordinance" committee of five to submit a recommendation of ways and means of obtaining the support of the industry in the matter indicated was also authorized.

Western Inspectors to Convene in January

The annual convention of the Western Association of Electrical Inspectors has been announced for January 27, 28 and 29, 1925, to be held at the Brown Hotel, Louisville, Ky. Programs will be ready shortly, according to the announcement.

Radio Trade Organizations Active

The past month has seen much activity by both local and national radio trade bodies, with still further campaigns to come in November. Great success in interesting the public in these affairs has been reported all along the line. Many of the large cities have held or will hold annual radio shows, most of them taking as a model the Radio World's Fair, which was held in October at Madison Square Garden, New York.

The New York show was reported a great success, both from the point of attendance and from that of business done. There were so many exhibitors that an overflow show was held at the 69th Regiment Armory and manufacturers reported orders from the floor, totaling over \$3,000,000.

Before and during the New York show many radio organizations held their annual meetings, among them the Radio Publishers' Association, the Radio Writers' League, the Radio Trade Association of New York and the National Radio Trade Association. There was also held the first annual Radio Industries Banquet at the Waldorf-Astoria Hotel, under the auspices of the National Association of Broadcasters, the Radio Manufacturers' Association, the National Radio Trade Association and the Talking Machine and Radio Men, Inc. The speakers included David Sarnoff, Radio Corporation of America; W. E. Harkness, American Telephone & Telegraph Company, and Professor L.

A. Hazeltine, inventor of the Neutrodyne circuit.

On October 6, Secretary of Commerce Hoover called the third annual conference of radio interests and in his address before the meeting made the suggestion that broadcasters organize a service similar to that which the newspapers have for their use in the press associations, which would furnish programs of national events and arrange for their transmission and distribution on some sort of a financial basis as the press associations do. This, he thought, might solve the problem of the small station in financing broadcasting programs. During the course of his talk he also took up the problem of wave lengths, the power of broadcasting stations, the tendency toward a decrease in the number of lower-powered broadcasting stations, and outside sources of interference.

"Edison Night" in the air took place on October 21, to commemorate the invention of the incandescent lamp on that date forty-five years before. Radio stations in twelve cities broadcasted programs of musical numbers furnished by General Electric employees in those cities and of addresses by leading figures in the utility field and officials of the company.

Another radio show, this time the National Radio Exposition, opens at the Grand Central Palace, New York, on the evening of November 3. Guglielmo Marconi, the "father of radio," is

scheduled to touch a key of a special transmitting instrument in his London laboratory, releasing by radio a bolt of power which will light a huge American flag outlined in electric lights on the front of the exposition building, thus officially opening the show. A long list of entertainers and special entertainments will add to the attraction of the many exhibits.

Closing this year's organization activities will be International Radio Week, from November 23 to 30. It will be under the auspices of the National Radio Trade Association, and twenty leading radio trade organizations are represented on the executive committee which is planning the program for the week. In addition to the activity in this country, representatives of foreign trade associations in England, France and other countries have formed separate executive and advisory committees to handle the work of radio week in their sections.

Announcement has been made of a Fifth Annual Radio Show and Convention of the Executive Radio Council in New York City, from March 2 to March 8, 1925.

The Cost of Merchandising

What do you have to make on your selling price in order to make eight percent on your investment? What items do you put down as operating expense and what percent are they of your total sales? An electragist in the south answers these questions for his business with an analysis of his operating cost for 1923, as shown in the table below. It will be noted that his selling and general administrative cost is 19 percent, slightly more 60 percent of the total and also that it is necessary to make 33 percent on his selling price in order to make eight percent on his investment.

PERCENTAGE OF SALES

Interest	1.
Telephone & Telegraph .....	.3
Bad Accounts .....	.5
Insurance	1.
Selling	10.
General Administrative	9.
Office	1.
License Taxes .....	.5
Water-Light-Fuel	1.
Advertising	2.
Traveling .....	.1
Legal Fees .....	.2
Rent	3.
Auto	1.
Depreciation—Furniture & Fixtures	
Depreciation—Auto .....	.4
Total	31%
To make 8 percent on investment	1.5
Surplus & Contingencies .....	.5
	33%

Tribute to Home Lighting Contest from Mrs. Lowry, Contractor and Housewife

A real tribute to the value of the Home Lighting Contest, both from the standpoint of the industry and from that of the housewife, is paid by Mrs. C. B. Lowry, president and active manager of the American Electric Company, one of the largest contracting firms of Omaha. Mrs. Lowry stands in a unique position in the electrical business. A little over four years ago her husband died, leaving on her hands a very much involved electrical contractor-dealer business. Mrs. Lowry suddenly found herself, without any knowledge of the art or experience in the business, thrust into the position of directing head of a precariously situated and badly disorganized business. It was either sink or swim.

With the indomitable will-power displayed ever since she set herself to the task, working and studying day and night to overcome the obstacles in her path, and they were many. The ordinary person would have given up, but she stayed with the ship and has brought it in with colors flying, today is actively operating one of the most successful businesses in Omaha.

This unusual woman has this to say of the contest:

"Our impression of the Better Home Lighting campaign is that it is the most comprehensive beneficial activity that has yet been planned by the electrical industry or any other organization.

"From a humanitarian standpoint it has tremendous possibilities and will considerably elevate our industry in the eyes of the public. In the way of better public relations and a better understanding of the industry by the public, it will benefit manufacturer, jobber, dealer, contractor and consumer.

"It is a movement that has definite merit and is fully justifiable from the viewpoint alone that it will decidedly improve the bad eye-sight condition prevailing among the children of our schools and the adults of the country, and will accentuate the attractiveness and comeliness of the home.

"A proper amount of light properly applied goes a long way in making the home an inviting place, and we all realize that our home life is the citadel around which our civilization is built and the foundation upon which our very existence and possible future accomplishments are based."

"From the viewpoint of the housewife, I know of nothing that has heretofore been inaugurated by any industry that will have such far-reaching effects toward improving her status in the home. The housewife is necessarily concerned with the conditions of the home as a major portion of her time is spent there. In improving the conditions surrounding the mothers of our country and the keepers of our domiciles we are doing something that is well worth while and the movement would be well justified from this point alone if it were shorn of all its many other advantages."

Electric Home for Houston

An electric home under private auspices is being completed in Houston and will shortly be ready for inspection by the public. The home is being built by E. H. Fleming & Company and the electrical work is being put in by the Barden Electric Company. The project has received much favorable newspaper publicity, the stories emphasizing the convenience and necessity of adequate wiring and good fixtures. The electrical equipment for the home includes an electric range, an electric ventilating system and a completely equipped laundry.

OBITUARIES

William V. Fisk

William V. Fisk, president of the Houston (Tex.) Electrical Contractors' Association, died October 4, aged 54. Mr. Fisk had been prominent in the electrical industry in Texas for many years, having come to Houston in 1893. Later he moved to California for a period, but returned to Texas. He was formerly with the Texas Company and with the Southwestern Bell Telephone Company.

Arthur S. Huey

Arthur S. Huey, chairman of the board of directors of H. M. Byllesby & Company, and for many years prominent in the operation of public utilities throughout the United States, died of pneumonia recently at his Chicago home. Closely identified with the electrical industry since 1895, Mr. Huey had been with the Byllesby organization as Vice President since it was founded in 1902.

Housewiring Time Payment Plan

A time payment plan for the financing of house wiring, which embodies certain suggestions by the staff of the Association of Electragists—International, has been set up by the Commercial Investment Trust, Inc., of New York. This plan which was announced at the West Baden convention, while similar in form to the company's other plans, has been worked out purely in with regard to the peculiar conditions surrounding the wiring of a house.

Under this plan the contractor determines the price at which he can sell the job for cash, with his overhead and profit included. Since 10 percent will be held by the Commercial Investment Trust, Inc., until the purchaser has paid his account in full, every time payment sale must carry its share of overhead and a profit, or it would be better left unsold.

To the price at which the contractor can sell for cash should be added 11 percent and this time payment price quoted on each job. Then if the purchaser desires to pay all cash, the contractor can allow him a discount of 10 percent.

The Plan operates as follows:

1. Obtain from the customer, either at or before the completion of the job, a cash payment of not less than 10 percent of the time payment price.

2. Have the proper time payment papers for the balance of the sale signed by the customer. The necessary forms are furnished without cost by the investment company.

3. Forward the documents, properly assigned, to the investment company and they will remit for 90 percent of the value thereof, less their charge as set forth in their rate chart. The remaining 10 percent will be remitted when the purchaser has paid in full.

To obtain the service it is necessary for the contractor to file a financial statement with the investment company. A form for that purpose or further information on the plan can be obtained by writing to the Commercial Investment Trust, Inc., 41 East 42nd Street, New York City.

The Steele Electric Company, Brookville, Pa., has opened a branch store at Summerville, Pa.

News Notes Concerning Electrical Contractor-Dealers

Business Changes, Store Improvements, and New Establishments Opened

W. G. Branson and J. C. Branson have bought the electrical business formerly conducted by John Lippincott at Bellefontaine, O.

The Ashton Electric Company has opened a retail store at 15 North Garfield, Alhambra, Calif.

A new electrical store has been opened at 128 West Campbell Avenue, Roanoke, Va.

H. G. Gorman will manage the Perry (Okla.) branch of the Whartenby Electrical Company of Enid, Okla.

The Wilson Electric Company, Monongahela, Pa., has been sold to William S. Montgomery.

Richard E. Vancleve, owner of the Winesburg Electric Company, Wheeling, W. Va., has bought out the business of the Four C Electric Company of that city.

An electrical store has been opened in Holcomb, N. Y., by Walter Balding and F. R. Appleton, the latter having been manager of the local telephone company.

Electrical fixtures and appliances will be carried at the establishment opened at 1219 Broad Street, Columbus, Ga., under the name of the Brown Electric Company.

Francis M. Klein has sold the stock of his electric supply store at Clinton, N. Y., to Lewis Fischer.

The retail store of the Electric Sales Company, 51 East Gay Street, Columbus, O., has been purchased by E. O. Lammers and is now known as "Lammers Electric."

A part interest in the O'Brien Electrical Company, Upper Sandusky, O., has been sold to H. E. Hedges and the company will hereafter be known as the O'Brien-Hedges Electrical Company.

Clement & Jewell, electrical contractors, have opened an equipment store and electrical shop in the McArthur Building, Franklinville, N. Y.

The new store of the Daylight Electric Company, Dunkirk, N. Y., has been opened at 68 East Fourth Street.

R. S. Walker will open an electrical store at Ellenville, N. Y.

The Gary Electric Company has been organized to operate a chain of electrical stores. Its first establishment is planned for Gary, Ind.

W. J. Lynott plans to erect a modern store building in Olyphant, Pa., to house his electrical business, his former establishment having been destroyed by fire recently.

Ralph Cook and Robert Grow have formed a partnership to conduct an electrical business at Lawrenceville, Ill.

A new business concern in Winslow, Ariz., is the Hot Shot Electric Company. It is owned by I. W. Bowen and L. C. Shreeves.

Kinyoun & Bowers will conduct an electrical contracting and retailing business at Penn Yan, N. Y.

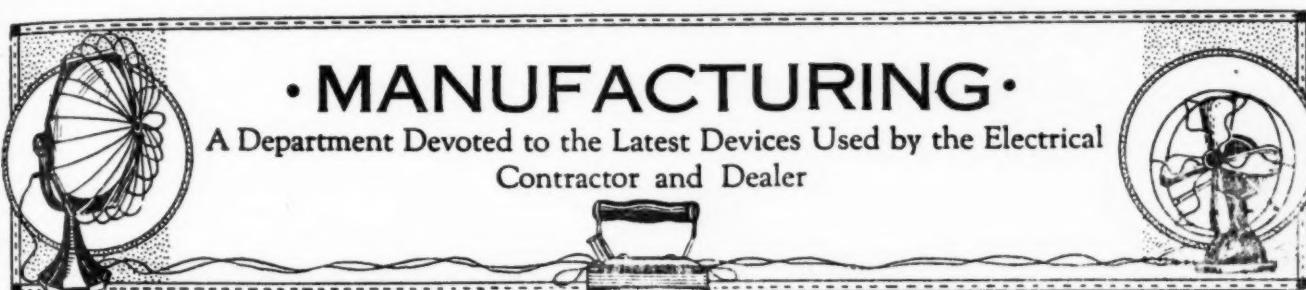
H. H. Stover, well-known commercial department official of the Colorado Springs Light, Heat & Power Company, has announced the opening of the Domestic Electric Appliance Company in Colorado Springs.

C. C. Miller & Company, Oneonta, N. Y., has opened a branch at Worcester, N. Y.

F. E. Robinson & Company, electrical contractor-dealers, are now in their new stores at 421 South Tryon Street, Charlotte, N. C.

Prizes at West Baden

During the A. E. I. Convention at West Baden one of the interesting features at the Appleton Electric Company's exhibit was the special drawing for prizes. P. N. Chess, of the Chess Electric Company, Terre Haute, Ind., won the first prize consisting of a portable type "Reelite." Second prize, consisting of an "AutoReelite," was won by C. C. Bohn, of the C. C. Bohn Electric Company, New York City. W. G. Street, of the Memphis Electric Company, Memphis, won third prize, consisting of a drop cord type "Reelite."



Combined Switch and Outlet

The Bryant Electric Company, Bridgeport, Conn., has recently placed on the market a combination Bakelite pendent switch and appliance outlet for use in connection with lighting fixtures which are out of convenient reach. The device, catalogue No. 29081, is composed of a push through switch and appliance re-



ceptacle contacts enclosed in a brown colored molded Bakelite casing. It is connected to the line and the lamp in the fixture by a three-conductor, braid covered, rubber-insulated cord. The switch controls only the light, the appliance outlet being always alive and ready to operate any appliances which may be connected to it by means of standard attachment plug caps with either parallel or tandem blades. The device is 2 3/4 inches long over all. It is furnished either with five feet of three-conductor, re-inforced, brown cotton covered cord or without cord.

Starting Compensator

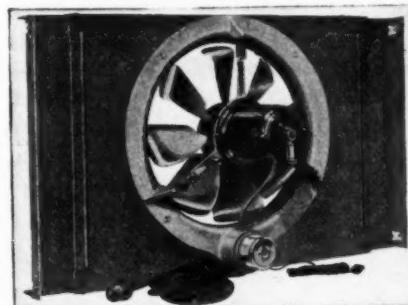
A new automatic starting compensator for squirrel cage induction motors, will soon be placed on the market by the General Electric Company. This motor starter is for remote control of constant speed two or three-phase squirrel cage motors up to 660 volts for general applications driving line shafting, pumps, compressors, blowers, conveyors, etc. With it such equipments may be started or stopped from a distance by means of one or more small

hand-operated push-buttons or snap switches located within convenient reach of the operator or automatically operated by pressure governor, float switch, thermostat, etc.

New features include: definite and adjustable time acceleration, obtained by means of a new induction type relay; positive overload protection of the complete equipment, obtained by a double pole, inverse time, temperature overload relay; the starting and running magnetic contactors are mounted back-to-back in a sheet steel enclosing case providing easy access to all parts; several taps on the auto-transformer provide for adjusting the low voltage, for starting to suit the requirements of different installations.

Ventilating Fan

One of the new features of the "Ventura" fan, manufactured by the American Blower Company of Detroit, Michigan, is the adjustable metal frame which can be made to fit any window. The new frame, which is made of enameled sheet steel, can be installed by fastening two metal strips to the frame of the window. No other carpenter or electrical work is necessary. The fan frame



can be readily lifted out and installed where it is most needed. Although the adjustable frame can be quickly and easily removed, it cannot possibly be dislodged accidentally. The ventilating unit is unusually noiseless. Spring suspension of the motor and fan blades prevents vibration and assures quiet opera-

tion. The fan blades are driven by a Westinghouse motor equipped with cord and attachment plug. The motor can be reversed so that the air can be either drawn into the room or expelled as desired. The frame comes in two sizes, one is adjustable from 24 to 34 inches wide, and the other from 32 to 50 inches wide.

Luminous Bowl Unit

A new luminous bowl fixture has been designed by Curtis Lighting, Inc., of Chicago, and is being marketed under the catalogue number 5801. The unit has an opal glass bowl containing an "X-Ray" reflector, which seats in the lip of the bowl in such a way that it prevents dust and dirt from settling on the inside. At the bottom of the reflector is a small diffuser cup which allows a small percentage of the light to come through from the lamp and softly light the glass bowl. The finish of metal parts is a monumental bronze. The unit comes in three sizes for lamps of 100 to 500 watts.

Kitchen Units

Two new "Red Spot" kitchen lighting units, embodying several improvements, have been announced by the F. W. Wakefield Brass Company, Vermillion, Ohio. The units are described in the company's data sheet, No. 1100, just issued. According to this data sheet the new units embody a sturdy and approved method of attaching the convenience outlet at very low cost and with the minimum expense for installing. A metal channel is screw-bolted to the porcelain enameled steel canopy which in turn is rigidly clamped to a heavy ceiling strap. The outer extremity of this channel is screwed to the ceiling, giving support to the three-conductor drop cord which terminates in a plug-in switch. The unit is shipped complete with the exception of glassware.

Washing Machine

A new washing machine, with a double-clutch action designed to protect the motor, is being manufactured by the Conlon Corporation, Chicago. The machine has two safety clutches, one controlling the wringer in case it gets jammed, the other protecting the cylinder mechanism against overloading. The tank of the machine is of heavy galvanized "Armco" iron or can be had in tinned copper. The floor of the cylinder is corrugated to give it strength, no solder being used in its construction. The perforations in the floor of the cylinder are in the channels where they do not come in contact with the clothes and in addition each perforation is beaded to produce smoothness. The cover, top and top edges of the cabinet are of polished aluminum.

Tumbler Switches

The new line of composition handle, tumbler switches and plates, being manufactured by the Arrow Electric Company, Hartford, Conn., is so designed as to provide for interchangeability. The plate will accommodate



practically any make of switch with square composition handle and the switch will fit practically any make of plate with rectangular slot. This switch has standard Arrow mechanism. The indicator is of embossed metal.

Dishwasher

A new electric dishwasher, manufactured by the Kehoe Company, Toledo, offers combined features of dish and silverware containers, liberal water connection and free drain. An effort has been made by the manufacturers to eliminate all objectionable features and parts, such as tubes, pipes or absorbent material. Parts exposed to grease or direct are also exposed to the washing effect of the machine. The machine utilizes the centrifugal force principle. Energy is stored up in a column of water revolving around at the greatest diameter of the bowl at a speed of approximately 700 feet per minute. This water is deflected into the dish container at three points, passing through the veins in the container producing the revolving motion and the washing effect on the dishes, then falling by gravity to

the bottom, from where it is swirled up into the revolving column once more.

The dish container is adapted to the greatest variety of dishes found in the average home. For silverware, a con-



venient detachable holder takes up a minimum of space. The water connection is of ample size to admit the necessary water in approximately 20 seconds.

Condensed Notes of Interest to the Trade

The October issue of "Trumbull Cheer," the house organ published by the Trumbull Electric Manufacturing Company, Plainville, Conn., is a special edition celebrating the twenty-fifth anniversary of the founding of the company. It gives a history of the company from its beginning in 1899 to the present.

Starting with a capital of \$2,000 and a factory containing not much more than 1,000 square feet of space, the company's officers, John and Henry Trumbull and Frank Wheeler, have brought it to its present position of prominence among manufacturers of electrical supplies.

A series of ten-minute talks on lighting subjects, designed for popular interest, were recently broadcasted by engineers of Curtis Lighting, Inc., Chicago.

The Russell & Stoll Company, 53 Rose Street, New York, has issued Bulletin No. 53, listing and describing its line of wall receptacles and table connectors.

The Economy Fuse & Manufacturing Company, Chicago, has announced that its Minneapolis district sales office has been removed to 1008 Marquette Ave.

A complete new set of data sheets on "Red Spot" lighting specialties, including the ornamental line, the standard hangers and accessories and the kitchen lighting units, has been issued by the F. W. Wakefield Brass Company, Vermilion, Ohio. The company has also announced that Herbert W. Wilson, formerly with the sales force of the Erner Electric Company, Cleveland, will have charge of trade development work with Wakefield jobbers.

The Mutual Electric & Machine Company, Detroit, has gotten out a pamphlet on its new "Luminized" finish for its safety switches.

A circular giving a complete listing and describing in detail the line of tumbler switches manufactured by the Arrow Electric Company, Hartford, Conn., is now ready for distribution.

The New York branch office and store-room of the Bussman Manufacturing Company, St. Louis, has been moved to 53 Park Place, New York.

A twenty-four page catalogue in four colors, listing and illustrating "Aladdin" lamps, is being distributed by the Aladdin Manufacturing Company, Muncie, Ind.

Government-Approved Mail Box

An apartment house mail box meeting the recently-issued specifications of the Post Office Department, is being made by the Columbia Metal Box Company, 226 East 144th Street, New York, and government approval of it has been secured. The box is built on the unit idea and is assembled in units of three, four, five or six boxes as required, and each box is large enough to receive magazines and other bulky mail matter. Each unit is provided with a master door which can be unlocked only by the mail carrier and each tenant has access only to his own box. The material is steel, electrically welded. The fronts are made either of brass, in polished or brush finish, or of heavy furniture steel in ivory, cream white, satin black, brass lacquer or bronze lacquer finish.